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EDITOR:

JAMES B. HUNTER, M. D.

VOLUME XXV.

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ERRATA.

On page 577, line 13, instead of twenty-seven, read forty-three.

The tables and text below should read as follows:

	No. of Cases.	Died.	Mortality.
Reduction easy	7	1	14 per cent.
Reduction difficult or impossible	12	11	91 per cent.

	Adults.		Infants.	
Reduction easy.	Cases 3. Died 0.	Mortality, 0.	Cases 4. Died 1.	Mortality, 25 per cent.
Reduction difficult or impossible.	Cases 4. Died 3.	Mortality, 75 per cent.	Cases 8. Died 8.	Mortality, 100 per cent.

From the above statements I think we may safely conclude that the mortality of abdominal section is probably determined much more by the condition of the intestine than by the age of the patient. For we find—taking all cases together—the mortality of the operation to be fourteen per cent. in the easy, and ninety-one per cent. in the difficult, cases; while in infants we obtain a mortality in easy cases of twenty-five per cent., and in difficult ones of one hundred per cent.

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Original Communications.

Art. I.—*The Actual Cautery in Spasms, Paralysis, and Epilepsy.* By Eugene Dupuy, M. D., of Paris, Member of the American Neurological Association; late Professor of Physiology in London; Corresponding Member of the Société de Biologie, Paris, etc.

I do not intend to give a full history of the use of the actual cautery in the treatment of nervous disorders, but only wish to report a few cases in which relief and cure were obtained by that therapeutic means when others had signally failed; and desire also to insist upon the way in which the instrument should be used in order to be beneficial. As a matter of course, it is unnecessary to state that the actual cautery is not a panacea; on the contrary, there are species of cases in which it is useful, and others in which it does no good, but harm. A correct diagnosis, not only of the disease, but an accurate search into the physiological pathology of the trouble, is essential, since one and the same disease in different individuals can arise from a variety of causes, and also one and the same cause can bring on quite a variety of disorders in different individuals.

I have chosen confirmed chronic cases as tests, and I owe to the friendship of Dr. John J. Mason, of this city, the opportunity of treating the cases in his wards at the Hospital for the Paralyzed and the Epileptic on Blackwell's Island. The reason why I chose chronic hospital cases, instead of those which I have had the opportunity of treating in my own practice in this country and lately in Europe, is too obvious to need commentary.

The first case of the chronic kind which I saw here was with my learned friend Dr. John J. Mason, during my first visit in this country some years ago. It was a young man, some twenty-two years old, a book-keeper by occupation, who suffered from spasmodic, painful wry neck, contraction of the right sterno-cleido-mastoideus muscle and subjacent ones. He had been in that state of suffering for over a year. He could find no rest in bed, but had to remain "fixed up" in an arm-chair; walking produced intense pain. He had received treatment at the hands of several physicians—treatment consisting of electricity under every form, and almost all the bromides, also subcutaneous injections of morphia, atropia, etc.

Not having at hand, in the laboratory in which I was then engaged in experimenting, an actual cautery, I used a file, the blunt extremity of which I heated to whiteness on a Bunsen burner, and made an application to the painful contracted muscles. Three days after the patient returned to have another application, which was done with a good instrument. He improved after each successive application. After the sixth he was radically cured, and has been so ever since (four years). I ought to have said that, during the treatment, he had abandoned all other medicines.

Case II.—V. H. S., epilepsy (*haut mal*) for twenty years. Has had the bromides, etc.; average fits thirty in a month. Always has pain in the head, and is troubled by constant dizziness. Has had nine applications of the cautery on both sides of the spinal processes, from the last cervical vertebra to the first lumbar. Since the first application of the cautery, thirty-seven days, has had only seven fits; says that pain in the head and dizziness have disappeared; employs himself at reading languages, and has written poetry.

Case III.—P. W., a German, of about thirty-six or eight years old; a fine case of hysteria, with diaphragmatic convulsions, etc. (the history of this man, which is very interesting, was communicated to the New York Society of Neurology by Dr. Mason some weeks ago). Cannot sit even in bed, without having a fit; has been suffering for the last eight years. The number of fits averages seventy per month. Has given up all drugs during the last thirty-seven days, and has had seven applications of the cautery on both sides of the upper dorsal vertebral processes. Has had ever since only thirty-four convulsions, which he says leave him less disturbed. He walks about and sits all day. (He never had paralysis.)

Case IV.—H. G., a boy of about fifteen or sixteen. Has had epilepsy from infancy; is sleepy; face wan and dull; has an average of thirty-nine fits in a month. Has for the last thirty-seven days given up the bromides, and only takes arsenic: nine applications of the cautery on the occiput and nape of the neck; fits reduced to eleven; is brighter and more cheerful; does not sleep after the fits, as he did before.

Case V.—P. H. N., about forty-five or fifty years old; paraplegic since 1867. Has had all sorts of treatment, including electricity under every form; is unable to walk without the use of a cane, and is stiff. Has had nine applications of the cautery on the dorso-lumbar spinal processes in thirty-seven days. He can stand erect, and walks about without the support of his cane.

Case VI.—M. C., Irish, about forty. Has some slight degree of paralysis of right arm, paralysis of sphincter ani, both legs stiff, without fibrillary contractions; has been in that state for eight years; has ever since been unable to assist in dressing or undressing himself; has had nine applications of the actual cautery in thirty-seven days. States that he is great deal better. He is capable of moving himself in bed, and can undress himself without assistance.

Case VII.—T. F., over thirty; received an injury on the spine (dorsal) by striking against a bridge while doing duty as a brakesman on a car; has not been free from pains for the last five years. Since the accident uses crutches to walk.

Has had several periods of long treatment; bears the marks (scars) of cauterization along the spine. Nine applications of the cautery in thirty-seven days along the cervico-dorsal spinal processes. Pains have vanished; he walks without crutches.

I wish to observe that, during the thirty-seven days that the treatment with the cautery lasted, those patients have had none of the medicines usually exhibited in such cases. I do not give a full history of every case, because these are all classical, commonplace cases of the diseases from which they are suffering.

The fact worthy of notice in these cases is, that all *had* tender, sometimes hyperæsthetic, spots along the spine. Patient No. II. had an hyperæsthetic spot at the level of the third dorsal vertebra, and a less sensitive one at the level of the dorso-lumbar region. No. III. had an hyperæsthetic spot between the last cervical and first dorsal vertebræ. No. IV. was sensitive to pressure all along the cervical vertebral processes. No. V. was very tender at the level of the middle dorsal and first lumbar vertebræ. No. VI. was very tender at the level of the second lumbar vertebra, of which the left process is less apparent than the right. The space occupied by this vertebra is smaller than it ought to be; there is, in fact, a declivity at that point. No. VII. feels a pain, tolerable, but acute, at the level of the seat of the injury, between the second and third dorsal vertebræ.

It may be supposed that the presence of pain in the spine of these patients indicated that the seat of the disease could be localized to those sensitive spots; and, moreover, it is not unreasonable to suppose that the meninges were more diseased, perhaps primarily, than the spine. Indeed, I believe that the spine as well as the brain is never affected primarily (except in traumatic cases, and then there are characteristic symptoms and sometimes none whatever, specially in case of brain). Diseases of these organs are brought about by reflex influences on the outer membranes, and nutritive disorders of the pia, by means of vessels and vascular nerves. I am in the habit of searching for those tender spots in all the cases of epilepsy or other nervous disorders which come under my notice. They are always more or less perceptible. Those who are familiar with the magnificent researches of Brown-Séquard on epilepsy will understand the value of such symptoms as bearing on causality. I have stated elsewhere what my views on the subject are;[1] and as my object in this paper is only to make known the good effects of the actual cautery, I shall now state how that instrument is used in order to be efficient. The rules which follow have been long since given by my eminent friend and teacher, Dr. Brown-Séquard: 1. The instrument has to be heated to whiteness; 2. It must be shaped like an olive (blunt end); 3. It must not be allowed to burn the skin, but is passed rapidly along the space to be acted upon, so that after the operation is over nothing is seen but a *white line*, very much resembling a scratch with a finger-nail. So applied, it is never painful. It can be repeated every other day, as there are no scars and no irritation left. The necessity for observing these rules is obvious, as the object of the operation is to act on the terminations of nerve-fibres in the skin, but not to destroy them; hence it is clear that the method of first applying ether-spray on the spot to be cauterized, so as to deaden the pain of the cautery, mars the good effects of the application of the instrument, because the ether-spray is itself *more painful* than the actual cautery when the latter is used after the manner above stated; and, moreover, it anæsthetizes the nerve-ends upon which it is desired to effect, so that the cauterization becomes useless.

ART. II.—*On the Necessity of sufficiently Extended Urethral Incisions for the Permanent Cure of Strictures of the Urethra. With a Description of a New Urethrotome of very Small Calibre, to be used preparatory to Dr. Otis's Dilating Urethrotome.* By W. H. BATES, M. D., Brooklyn.

PROBABLY at no time has the subject of the treatment of strictures of the urethra attracted more attention from surgeons than the present—more especially since the revival of the operation of internal urethrotomy, and the introduction of new instruments for the purpose of diagnosis and treatment of this class of troublesome affections—not only to the patients, but to the surgeon. It must be obvious that the value of all new principles advanced, and the curative procedures under them, cannot be judged or criticised from an abstract point of view; therefore practical experience upon real cases is the only reliable basis upon which rational conclusions can be founded. With this view I propose to contribute some of the results of my personal experience, which bear upon the recent discussions in this department of surgery—excluding such details as are general to strictures as a class.

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[1] C. R., Société de Biologie, 1875; *Gazette Médicale de Paris*, 1875, pp. 376, 600; "On Some Forms of Hysterical Disorders," in *New York Medical Record*, 1876; a paper on the "Physiology of the Brain," read at the American Neurological Association, June, 1876, etc.

The most protracted case I have any record of is that of a man now over seventy-four years of age, on whom I operated between eight and nine years ago. At that time his stricture had existed for nearly fifty years. He had been under the treatment of some of the ablest surgeons, including Drs. Valentine Mott and J. Kearney Rodgers. He had been in the habit of passing a No. 16 French steel sound almost daily. After several months' treatment, I did not succeed in carrying dilatation above No. 18 French, which was painful, and as a last resort I divided the stricture with Civiale's urethrotome, after which No. 27 French steel sound was readily introduced into his bladder. The introduction of this same number was continued for some time with marked benefit. The patient's general condition being greatly improved, his urethral discharge diminished. I then lost sight of him for a time; subsequently I saw him for other trouble; he informed me that he was very much better. Last spring he came to my office, and I desired to examine his urethra. He stated that he had remained well. I passed easily the same sound I had used on him previously. I also examined him with the urethrometer, and found no trace of stricture at the seat of division. The patient had found no necessity for having recourse to any instruments, since those passed by myself.

The next case was likewise a protracted one. Mr. K., aged thirty-three years. For five years past has been troubled with muco-purulent discharge, which would occasionally cease for a month or two, and then return, without apparent cause. Had been constantly under treatment, and examined for stricture by several surgeons, but was assured that none existed. On examination, I found a stricture of large calibre, readily admitting a No. 27 steel sound, about four inches from the meatus. Persevering efforts to effect higher dilatation were continued through several months, with only temporary benefit, the stricture remaining firm and rigid. Divulsion by means of Holt's divulsor was resorted to, but without permanent benefit. I then divided the stricture with a urethrotome, up to No. 30 French, and introduced No. 30 steel sound into the bladder daily, for a few days, when the patient informed me that all discharge had ceased, and he discontinued his attendance. He has remained perfectly well up to the present time, now over two years, using no sound whatever. I quite recently examined his urethra carefully with the urethrometer and bulbous sounds, and failed to detect the slightest indication of stricture.

The next case was one of multiple stricture. Mr. R., aged twenty-five years. Six or seven years ago he contracted gonorrhœa, which ran into a gleet, for which he was constantly treated; came under my care more than a year ago. Three strictures were detected and operated upon successively, with Dr. Otis's dilating urethrotome, dividing little above the normal calibre, thirty-four millimetres, previously ascertained with the urethrometer. The rapid cessation of the discharge followed the operations. This patient has frequently been carefully examined since, and there is no evidence of any stricture left. He has likewise had no subsequent recourse to instruments.

The next case illustrates the persistence of stricture with free discharge, notwithstanding what would be considered an ample urethra. (*Vide* Sir Henry Thompson's recent lectures, London *Lancet.*) Mr. M., aged thirty-five years. Had been troubled with stricture for several years, for which he had been treated by a surgeon in Germany, by dilatation, which he had very irregularly continued. Recontraction had taken place, followed by free discharge, for which I was consulted.

After the acute symptoms had subsided, the normal calibre of the urethra, thirty-seven millimetres, was restored by operation, the strictured portion being thirty millimetres. This patient has remained well ever since, now over a year. Uses no sound.

The following case is of interest, showing the effect of the restoration of the urethra on long-continued discharge, the discharge in this case having lasted for a period of twenty-six years. Mr. F., aged forty-five years. Contracted gonorrhœa at the age of nineteen; over a year ago was placed under my care for treatment by Dr. Shaw. Stated that he had never been free from urethral discharge since he first contracted disease. On examination, four strictures were found, three of which, situated in the pendulous portion, were divided, and the normal calibre of the urethra restored. The fourth, situated in the membranous portion, was divulsed. The frequent introduction of sounds for a few weeks was continued. This patient was so much pleased with the relief given him (having frequently suffered from retention), that he declined to submit to anything being done for the cessation of the discharge, considering it of no consequence. A short time ago he called upon me, and I examined him, and found that not the slightest contraction had taken place in the strictures that had been divided. One situated in the membranous portion which had been divulsed, but not cut, had recontracted (of which I shall speak hereafter). There was not the slightest trace of any discharge to be detected from this patient's urethra. He informed me that it had recently entirely ceased. There had been no introduction of instruments in this case after the first few weeks subsequent to the operation. I think this case illustrates somewhat the effects of the operation upon a similar case of long-continued discharge, which Dr. Otis operated on in July, in London, for the cure of gleet, and which Mr. Berkley Hill published in the *Lancet.* He stated that "the discharge ran on until the holidays, and was then cured by other means." In that case, as in this, the subsequent cessation of the discharge may have been due to the original operation, and not to the after-medication.

The most interesting feature of the next case which I shall offer is the very large calibre of the urethra, coexisting with the persisting symptoms of stricture. I wish it understood that these figures are not the result of dilatation, but simply the normal measurement, as determined by the urethrometer and bulbous sounds. Mr. W., aged thirty-three years; height five feet eleven inches, weight one hundred and eighty pounds. This patient contracted a gonorrhœa two or three years ago, followed by a gleet. The discharge never entirely ceased. On examination, found a stricture at the meatus, of twenty-five millimetres calibre. The normal calibre of the urethra, as ascertained by the urethrometer, was forty-five millimetres. A second stricture was found four inches from the meatus, of a calibre of thirty-seven millimetres. The strictures were divided so as freely to admit No. 40 steel sound, being the largest then in my possession, which was passed daily, until the parts healed.

The discharge rapidly diminished. The patient remained under treatment for several weeks, but the discharge not disappearing, although several operations had been performed with Otis's dilating urethrotome expanded to its fullest extent, forty-six millimetres, and a large bulbous bougie passed every second day to keep the incision open, without much benefit, the patient, being desirous of returning to his home in Massachusetts, promised to correspond with me, and, if no improvement took place, to return again at some future time for further treatment.

He wrote me a couple of times, saying that he remained about the same, with the exception of the stricture at four inches, which failed to admit his bulbous bougie so readily as formerly (which I had, contrary to my usual habit, requested him to pass occasionally).

He did return to the city early in the autumn for further treatment.

I operated on him again for the second stricture, which had recontracted, but still without satisfactory results.

I now determined to divide the stricture-tissue more deeply, feeling satisfied that my incisions had failed to completely sever the stricture, owing to the largest urethrotome being too small to divide it completely. After a little time, I devised the following means of increasing the size of Otis's dilating urethrotome: I took a piece of wood cut to the size and shape of the lower blade of the instrument, and with rubber tubing one-eighth of an inch in diameter, binding the wood firmly, and completely covering it. This gave me a perfectly smooth and even surface, and increased the size of the urethrotome seven millimetres by measurement.

With this addition I operated, dilating and dividing up to fifty-three millimetres. There was very little hæmorrhage following this deep incision—certainly not more than two drachms. The patient had provided himself with a steel sound of forty-five millimetres calibre, which was introduced daily for about a week. The patient rapidly improved after this last operation, the discharge ceasing entirely. He has returned home, promising to communicate with me again if there should be any recurrence. On careful examination with bulbous sounds, I failed to detect the slightest contraction. Of course, it is too soon to speak as to the ultimate result in this case. I report it at this time simply on account of the very large size of the urethral canal, admitting No. 45 steel sound to pass readily into the bladder, by simply guiding it. *Should* such a thing recur again, such is my faith in the principles here enunciated and illustrated that, notwithstanding the dilatation hitherto attained, I should dilate and divide until all resistance ceased, and morbid symptoms disappeared; after this has been accomplished, it will be quite time enough to use medication, which, it is my growing conviction, by these procedures will be rendered unnecessary.

The cases narrated by no means exhaust the records which have accumulated in my possession, but I think at this time it is unnecessary to add more, as those that I have selected are not exceptional, but the average results I have obtained by internal urethrotomy. I am satisfied, from my own experience, that the operation fails sometimes, owing to its incomplete performance.

As to the future of these cases, that still remains in doubt; and, if hereafter I find that recontraction has taken place, I shall be pleased to report such fact.

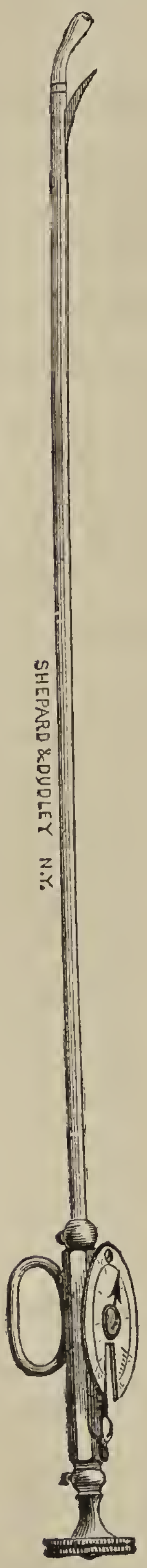
To none of my patients on whom I operate do I advise the continued use of sounds; with what results, the few examples given may serve as illustration.

In common with all surgeons, I have occasionally met with strictures of small calibre, that it was desirable to divide, in order to allow the introduction of a sufficiently large urethrotome, to complete the division, for the purpose of effecting a cure; and have felt the want of a sufficiently small and safe urethrotome suitable in these cases.

The best that we had was Maisonneuve's, which cuts from before backward, and is liable to get out of the urethra, thus making a troublesome and often dangerous false passage. To avoid this, Dr. Gouley has added a "bridged" tip, so that it threads over a whalebone guide, but the blade is not concealed, and is liable to wound the urethra where it should not. M. Horteloup, of Paris, has very recently devised a new urethrotome, or set of urethrotomes, comprising four instruments (*see Annales de Dermatologie et de Syphiligraphie*, tome vii., page 453), which have concealed blades—the smallest of which cuts to eleven millimetres, and the largest to twenty-three millimetres. There is a bulb projecting on the under surface of these instruments, where the blade is concealed. This is claimed to be a great improvement on Maisonneuve's but, like it, cuts from before backward, which is objectionable; another objection to this novelty is, that four separate instruments are required to effect the object, which is quite as thoroughly attained by the single one, which I now propose to describe. Let me premise that this instrument was manufactured from my plans, and under my direction, by Messrs. Shepard & Dudley, of New York.

The drawings for it were made over a year ago, and the instrument has been in my hands for a long time. I have waited for suitable cases on which to test it previous to making it public, in order to remedy any existing defects that might be disclosed in its use. I offer it simply as an adjunct to Dr. Otis's dilating urethrotome, believing that it is better and safer than any of the existing small urethrotomes in cases requiring its use. It consists of a handle to which is attached a steel canula, eight inches long, containing a concealed knife, which may be projected to the extent of twenty millimetres

The instrument terminates in a "bridged" tip, which screws on the canula; there are two of these tips accompanying each instrument, pointing in opposite directions for the purpose of enabling the operator to use the knife either on the upper or under surface of the urethra, as he may deem advisable, this still being a question *sub judice.*



The blade is concealed in the end of the canula, and is projected by turning the screw in the end of the handle to the right. The end of the canula where the knife is projected through the slot is of solid metal, rendering firm support to the blade, and adding greatly to the strength of the instrument. To the handle is attached a scale, with an index, such as is used by Dr. Otis on his instruments, which enables the operator to know and govern the exact limits of his incision. The diameter of this instrument at its tip is two and two-thirds millimetres. The canula is a little more, but considerably less than three millimetres, bringing the instrument down to about the calibre of Maisonneuve's. It is operated in this manner: After having passed one of Otis's long whalebone guides through the stricture into the bladder, the tip of the instrument is threaded over it, and passed through the stricture. The knife is then projected by turning the screw in the handle to the right. The instrument is then slowly withdrawn; as soon as all resistance ceases, the blade is withdrawn into the canula, by reversing the screw in the handle, viz., to the left.

This will prevent the possibility of wounding the healthy portion of the urethra; in other words, the knife cuts only where the operator wills it.

The advantages of this instrument are, that it cuts from behind forward; consequently there is no danger of getting out of the urethra. It combines simplicity with strength, is easily cleansed and kept in order, and last, but not least, is not more costly than any urethrotome of small calibre hitherto offered to the profession.

An examination of the accompanying woodcut, which represents the knife half closed, will render more minute descriptive details unnecessary.

Its special applicability was most manifest in the case of Mr. F., already described. It will be remembered that this patient had a stricture in the membranous portion of the urethra, which had been ineffectually divulsed, while three situated anterior to it had been successfully cut without subsequent contraction. It is a well-known fact that the division of strictures in the deep urethra is attended with greater danger from hæmorrhage than those made in other parts more anterior. Hence the importance of confining the former within strict limits of morbid structure. This instrument enables the operator so to appreciate the parts to be cut that all divisions necessary to be made reduce the danger to a minimum. Thus, in Mr. F.'s case, when the stricture already divulsed had recontracted until a small whalebone guide could only be passed through it, upon this the urethrotome was threaded, and the stricture divided to twenty millimetres, after which Otis's dilating urethrotome was readily introduced, and the canal enlarged to thirty-two millimetres. So little hæmorrhage followed that no artificial means were required for its arrest, and, after thirty-six hours confinement in bed, he returned to his accustomed business. Since then the patient has remained perfectly well, and free from inconvenience.

Art. III.—*The Malady of Innutrition.*[1] By George Bayles, M. D., Fellow of the New York Academy of Medicine.

In the preparation of this paper it has not been forgotten that the subject is simply the negative aspect of a very elementary and rudimentary principle in the physiological theory and practice of Nature. It therefore follows that we are dealing with nothing new, but nevertheless with something of substantial importance.

In our professional calling it has, or ought to have, become a habit of thought to revert from that which is healing to that which is preventive of the maladies we seek to cure. Modern medicine demands of its students this dual method of contemplation until physical ills are met by effective opposition at a point the most remote from actual disaster. That this demand is being recognized and complied with we all rejoice to believe, and it is a crown of glory to the modern physician that his field of usefulness has bounds in relation to which his administration of medicine and his operative surgery are as nothing. Our profession is working up to the position of sanitary monitors rather than mere skilled specialists in the use of drugs, and the day is dawning when our expertness in preventing diseases will far outrank our skill in their cure. There is no doubt but that this era will be a gain to the many, though it may be a loss to the professional few who find their living in dealing with ills that are already present.

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[1] Read at a stated meeting of the New York Academy of Medicine, Thursday evening, October 5, 1876.

We can attempt little more than a glance at a subject which introduces both incidentally and traditionally the mainspring of human *malaise*, disease, and untimely death. In this line of thought side-issues are not ignored, but are left unreviewed, as their relations bear the appearance of sequence rather than of potent generative cause in the production of so much of prevalent human distress.

Though acknowledging the extreme pertinence of this subject to infant pathology, therapeutics, and mortality, it is not with that branch of the subject that we propose specifically to deal at this time. There are other aspects of the subject that for many reasons seem to rival the infantile in importance. Ante-natal innutrition is quite as common a source of post-natal disease and death as is the impoverishment of the body through want, neglect, or ignorance after birth. What animates us at the present moment is the comparative newness of this elemental cause on this continent, or in the United States of America, where abundance has been so truly our birthright, and milk and honey the immigrant's dream and confident expectation. The reaction from severe financial depression in this country has not been so prompt nor universal as to save us from the advent of a calamity which has heretofore been an evil confined to the Old World. I refer to confirmed pauperism and unrelievable poverty. There is no inconsiderable amount of this element developed here, which will probably never be eradicated, but, on the contrary, will formulate itself into a kind of chronic and professional mendicancy, that will have to be endured. This is sad, but perhaps not so sad as the fact of the definitely-prescribed steps of the decline toward personal and family want, through which the direst poverty has usually been approached.

Whether absolute poverty is reached or not, the protracted period of commercial and industrial stagnation has created much wide-spread pecuniary distress, such as it has never before been our lot to suffer. Insufficient food-supply has become a prominent and lamentable feature in this prevalence of need. Though new to us in this country, all the lessons of such a condition are well taught in the statistical and general histories of other countries. Any European country can furnish us with a schedule, sufficiently full in detail, of all that starvation implies; and more than that, it can furnish warnings that the physician, at least, will not leave unheeded.

To the physician, who is among the few who deal, with personal directness, with the people of all classes, and who sees as well as hears the dreadful facts, it comes home with the verity and force of a personal affliction, and he realizes acutely what sad experiences and suffering are doing with the bodies and minds of the patient, the friend, and the good citizen.

The physician is commonly the first to learn of the deprivations and sufferings due to the lessening streams of pecuniary resources. It is the physician's almost constant experience that so many of those who were once prosperous are now in difficulties; that those who, in the domestic sense, were comfortable and well provided, are now in sore distress.

It is estimated that, among private patients of our city physicians, about fifty per cent. have suffered unfortunate changes in their worldly circumstances during the past three years. Of this percentage, about twenty-five per cent. have become seriously involved in money difficulties, which may never be removed. Of this number, not far from ten per cent. are hopelessly deprived of all that would lift them above the common herd of strugglers for a daily subsistence. A definite percentage have suffered either in their minds or bodies the extreme penalty of failure and irretrievable pecuniary misfortune.

In the opposite direction, only two per cent. or thereabouts have realized a substantial enlargement of their incomes and general means of living. Less than a half of one per cent. have vaulted into ample fortunes by any circumstance of life or death with which they have been concerned.

No appreciable percentage have become demented in consequence of suddenly-acquired wealth, and death has claimed no victims from the shock of sudden opulence as far as known to our seekers after these statistics. Different grades of medical practice give different results in such questions as these, and we are not at all sure, but strongly suspect, that many physicians having large responsibilities among the so-called medium and sub-medium classes could furnish statistics that would greatly increase the respective percentages in the line of progressive and helpless penury.

With us, as a people, new elements of suffering are not received with the comparative unconcern and indifference that would be the case in countries where the absence of such suffering would be phenomenal. To an American-born citizen, unaccustomed to want and privation, a sudden reverse of fortune, or a steady decline in the required pecuniary resources, is a cause for apprehension and alarm. The sense of approaching and probable dependence is appalling.

Henceforth, as a people, we have to take our places upon the common plane of average humanity—seek that we may find, and hoard that we may accumulate.

Of all the influences which modify the life of the individual, and on which his weal or woe depends, undoubtedly the nature of his food is one of the weightiest. Every one has for himself experienced how not only the strength of his muscles, but also the course of his thought and his whole mental tone, is affected by the nature of his food, and notably the amount of his food. *Whatever* makes man what he is depends entirely on the fact that man possesses a stomach, and is subject to a law of Nature which compels him daily to take a certain amount of food.

This is the decision of history as regards, not only the creditable development of a nation, but also the development of the whole human race, from the cave and pile dwellers of prehistoric times, to the polished and courteous peoples of the later and modern ages.

Now, it is easy to be enticed into a review of the best thoughts of noted observers, physiologists, and philosophers, on the many questions suggested by a consideration of the proper and essential food-supply of each individual, according to age, sex, condition, and kind of industry he or she pursues. This would, however, extend the plan and measure of one paper beyond reasonable limits.

All over the country the number, already large, is rapidly increasing, of those whose wealth lay in the interest-bearing bonds in coal, iron, railroad property, or real estate, which, having become unproductive and unsalable, is being forfeited without hope of redemption even in part. Families whose paternal head has been removed by death, have been left supplied with means supposed to be sufficient to meet every emergency, but they suddenly awake to the realization that they have nothing, nor have they even a bread-winner among them. But the real cause of regret arises, not so much from the sum of pain and deprivation as it stands at the present moment, as from this, viz., that the facts as they stand denote a physical degeneracy having a swift descent, and a tendency to permanency, thus reversing the universal law of human progress, improvement, and development.

To illustrate our understanding of the universal law spoken of, we quote the observations of a distinguished American physician, Dr. Edward Jarvis, of Massachusetts, in his fifth annual report of the Massachusetts Board of Health. He presents a group of striking vital statistics of various countries, which shows the effect of the advance of civilization in protracting the term of human life:

" By the better adaptation of means, circumstances, and habits, man's life has been expanded, his strength increased, and his days on earth prolonged. In ancient Rome in the period two hundred to five hundred years after the dawn of the Christian era, the average duration of life in the most favored class was thirty years. In the present century, the average longevity of persons *of the same class*" (this, of course, implying the full adaptation of Nature's resources to Nature's needs) "is fifty years. In the sixteenth century, the average longevity in Geneva was a fraction over twenty-one years; between 1814 and 1833 it was a fraction over forty; and as large a proportion now live to seventy as to forty-three three hundred years ago.

"In 1693 the British Government borrowed money by selling annuities on lives from infancy upward, on the basis of the average longevity. The treasury received the price and paid the annuities regularly as long as the annuitants lived. The contract was mutually satisfactory and profitable. Ninety-seven years later, Mr. Pitt issued another tontine, or scale of annuities, on the basis of the same expectation of life as in the previous century. These latter annuitants, however, lived so much longer than their predecessors, that it proved to be a very costly loan for the government. It was found that while 10,000 of each sex in the first tontine died under the age of twenty-eight, only 5,722 males and 6,416 females in the second tontine died at the same age one hundred years later. The average life of annuitants of 1693 was a fraction over twenty-six years, while those of 1790 lived thirty-three years and nine months after they were thirty years old. From these facts," says Dr. Jarvis, "it is plain that life in many forms and manifestations, and probably in all, can be expanded in vigor, intensity, and duration, under favorable influences. For this purpose it is only necessary that the circumstances amid which, and the conditions in which, any form of life is placed, should be brought into harmony with the law appointed for its being. Man has increased his own life, in so far as he has conformed his self-management to the requirements of the vital law."

Whatever retards or reverses the progress so notably essential in the attainment of man's normal destiny as a being capable of reaching physical perfection, and also of experiencing great happiness, is a violation of a scheme of Nature that brings with it its own miserable consequences. As far as our own country is concerned, it is not probable that such suffering as the times have forced upon it ought to be more loosely characterized than as a specific and important element in the present state of American pathogenetics.

In all my cases of diphtheria in 1875, described with clinical detail in a recently-published paper, the cause of the disease seemed to rest principally and *primarily* with an insufficient food-supply, and the alleviation of hunger mainly accounted for the fortunate results of treatment in those cases. It was hunger expressed, not so much by the cravings of appetite (we might say almost not at all), but rather by the wasting of strength, diminishing tissual structure, and lessening blood-purity. An appropriate and prompt restoration of the essential elements required, aided more than anything else the powers of Nature to throw off the burden of disease. In such cases medicine became food and food became medicine. It became necessary that the functions of the body should respond to the medicine, as though to a wholesome diet.

In greater or lesser degree this is true of all indications for treatment of disease, but noticeably so of all wasting diseases, among which we find diphtheria, a disease wasteful in the highest degree. The prevalence of this disease will be dependent upon the continuance and severity of all general and local causes of insufficient food-supply. Children at the breast are just as liable to this malady as older children and adults, if sustenance fails to be proper and plenty. For aught of positive evidence to the contrary, an insufficiently-sustained body, in any class of the community where either want or plenty obtains, is the initiative and predisposing cause of this disease. For many reasons not necessary to recall to the minds of medical men, badly-nourished bodies may readily enough be found in the abodes of luxury. A fickle appetite, coupled with ignorance and neglect of proper diet, may end in impoverishing the body to a degree sufficient to invite many diseases. Certain peculiar corporeal conditions, in conjunction with practical starvation, are sufficient to excite diphtheria as a definite morbid result.

What has been said of diphtheria in this connection is equally true of many other forms of disease having their origin in blood-deterioration. A varied observation in private and dispensary practice has directed attention to the fact that great and wide-spread want of a varied, sufficient, and appropriate food-allowance, has been a potent factor in confirming old cases of mental and physical derangement, in eliciting the manifestations of latent and inherited disorders, and in developing incidental diseases with a plentiful array of new phenomena.

Tuberculosis is increasing; nervous disorders of every variety are evidently becoming more prevalent, particularly the hysterias, neuralgias, and the diseases that resemble the latter. Uterine irregularities and abnormalities of organic and functional natures are increasing in an unprecedented ratio. Cachexias of all kinds are hourly revealing themselves by too certain manifestations. Eczemas and other eruptive disorders of the skin depending upon bad constitutional states are becoming more numerous. Pneumonia has been phenomenally prevalent of late years, and very fatal. Ephemeral fevers and those of the zymotic order have been rather more frequent and none the less formidable.

To attribute this unfavorable report solely to the lack of a proper diet would not be quite just; but regarded as a positive and general condition, working in advance of more specific influences, preparing the way for any form of morbific invasion, that cause has been of importance equal to if not greater than that of any other.

If perchance we imperfectly knew the law of longevity, or if the laws of sound health were yet a matter of conjecture, then we would have a light measure of responsibility. The character of our knowledge as physicians and scientists in these matters has passed beyond speculation and supposition, and if duly appreciated as of vital importance, and employed as our best interests demand, we shall be able to turn to our advantage the laws of heredity, and establish on a firm basis the habits that are consonant with the laws relating to longevity.

The laws of heredity, which may be expressed with fair general accuracy by the term "like begets like," are of such a nature that, by fixing the standard of individual health, strength, and mental aptitude, at a high point, the law of transmission will give heredity a brilliant place in vital economy.

This, then, is clearly our starting-point in the conservation and improvement of the great human machine upon which the unknown future depends for weal or woe. The malady of innutrition, if not suppressed, will be fatal to the future. After confirming to our advantage the law of heredity (looking to other agencies to make that inheritance more or less valuable), the next great thing will be to promote the law of longevity, which in another part of this paper was shown to be an actively operative law, and one not easily defeated.

One can hardly have been a thoughtful student of this subject to repose in the supposition that this food-question only concerns the extremely poor. Lack of food may be the chief evil with that unfortunate class; but improper food, imperfectly prepared, irregularly taken, and badly digested, is the crying evil with the wealthier classes.

Art. IV. — *Conjunctivitis Granulosa. A New Mode of Treatment.* By Dr. A. Mascaro.

So wide-spread is this disease that it may with propriety be called a calamity. It often results in the destruction of the eyeball, and so varied are its terminations, that it may be considered as one source of all the diseases of the eye.

The treatment of this disease is in its infancy. It seems incredible that the science which has brought upon unknown worlds the light of the ophthalmoscope should fail before this little *grain of sand.*

We have always believed that the treatment of this disease would succeed only when we obtained an isolation of the eyeball from the lid which mechanically tends to destroy the cornea.

Every practitioner has thought of this, and every one has abandoned the subject, struck with the idea that such an insulator would act the part of a foreign body in the eye. We have ourselves often felt the impulse toward experimentation controlled by such preconceived notions.

We must find a body which will resemble as much as possible the normal conjunctiva.

While on a visit to Brazil in 1873, aided by Dr. E. Dominguez, I made some experiments with coagulated albumen, and did not find a single patient unable to tolerate it. Emboldened by these results I have since continued to make use of this treatment; for, besides relieving the ball from the destructive action of the lid, it does not interfere with the usual methods of treatment. The following observation readily proves that even the latter may be unnecessary: Patients deprived of an eye will get well of a granular conjunctivitis by wearing an artificial eye, while the process will continue in the other side. This remarkable fact gave me the idea of substituting the enamel for the albumen. I have succeeded beyond my expectations, though I have been obliged to deal with the difficulty of finding an efficient moulder. At every eye-clinic some attention should be paid to the application of enamel pieces, because, unfortunately, those who make them cannot apply them, and those who apply them cannot make them. But little is gained without a knowledge of the means of making and modifying these pieces. This deficiency was felt by Hazard-Mirault in the last century.

The enamel-pieces have some advantages over the albuminous, which are counterbalanced by the difficulty of manipulating the former. The albuminous pieces are easily made by coagulating the albumen in appropriate moulds. In some cases I have combined the advantages of both, by placing an albumen-piece inside of the enamel. These pieces I construct with a central opening, so as not to interfere with vision.

In cases in which operations upon the external canthus are resorted to, to relieve the pressure of the eyelid upon the ball, I succeed in relieving the spasm, and restoring the elasticity of the eyelid, by inserting an enamel or albumen piece for three, four, or even ten hours a day.

To those patients who are unable to furnish themselves with an artificial eye, I always recommend the use of a piece of albumen, to avoid the action of the eyelashes upon the mucous membrane. I find my patients soon able and ready to manufacture these for themselves.

I wait for some further confirmation before calling attention to other applications of this method.

Art. V.—*Galvano-puncture of a Hydrovarium.* By Emil Flies, M. D.

The following original paper was read before the Berliner medicinische Gesellschaft, at the stated meeting, January 13, 1869, and also, with some necessary notes appended, before the Medico-Surgical Society of German Physicians of New York City, at a stated meeting in 1870.

Mr. President: There were two reasons to induce me to try galvano-puncture for the radical cure of hydrovaria, viz.: 1. Because of the generally unfavorable prognosis in these cases, and doubtful issue from dangerous operative treatment, or even from palliative punctures. 2. Because of the usual favorable issue of galvano-puncture, or of even only external galvanization of various tumors.

For several years, my desire to obtain from my colleagues—who intrusted to me other patients for galvanic treatment—a proper case for the above treatment was not gratified, but, finally, Prof. Schoeller, remembering my wishes, had the kindness, with the concurrence of Dr. Lohde, the patient's family physician, to place in my care a case of cystovarium for treatment by galvano-puncture.

The patient, aged thirty, enjoyed fair health up to her seventeenth year, menstruating regularly every twenty-fourth or twenty-fifth day, but, in that year, while riding to the country during a very severe frost, in an open carriage, while menstruating, she caught a violent cold. From that time her menses, though regular, were always attended with violent colic, and, with this exception, her health remained unimpaired.

Patient was married in her twenty-third year, and her first pregnancy, in 1861, passed off comparatively well, but, after delivery, sometimes slight, and sometimes severe, pains occurred in regio iliaca dextra. In February, 1865, patient was delivered, by means of version and forceps, of twins, but remained very weak and delicate, and, during her third pregnancy, mental emotions, caused chiefly by the death of one of the twins, aggravated her weak condition, and, after her third confinement, in January, 1867, which was an easy one, the pains referred to above increased. In December, 1867, sensations, inclinations, and bodily alterations, similar to gravidity, took place, but her menses were uninterruptedly regular; yet Dr. Lohde notified me that he had observed the evacuation of a *mola hydatica.*

From February, 1868, the abdomen grew very remarkably and rapidly, her strength simultaneously diminishing, violent fainting fits occurring, and her mind being alternately excited or depressed. The pain in the abdomen increased in the course of the summer, and about July œdema pedum was observed. Often watery discharges from the genitalia[1] took place, at first small in quantity, but, after August, increasing, but never more than about four ounces at a time, yet not followed by any decrease in the size of the abdomen. At the same time the pains in the regio sacralis, hitherto tolerable, increased to such a degree that the patient could hardly sit half an hour in the same position, and was generally restless from these pains. In the beginning of September these pains ceased, as well as the watery discharges, but the size of the abdomen increased more and more, and the patient could feel the gurgling of the fluid up as high as the stomach. She had expected to be confined about the middle of October, but, as she was disappointed, her spirits, which had for a short time been buoyant, again became depressed, the weakness and emaciation, together with the continued increasing size of the tumor, persisted, and fainting fits occurred to a dangerous extent.

Notwithstanding her sufferings, and the encroachment of the tumor on the adjacent viscera, no considerable impairment of the digestion, respiration, or circulation, took place, and menstruation continued regularly, but was more copious, and the bloody discharge darker than before.

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[1] The late Prof. Blasius, of Halle, published, about 1834, in an academical programme, a paper on this subject, entitled "De hydrope profluente," which I regret not to have been able to obtain.

Status præsens.—The patient is slender and very thin, and the bony frame delicate, the abdomen considerably swollen, as far as to the hypochondries, more on the right side than on the left, and she describes the sensation to be as if that part of her body was filled up with cushions. I measured the abdomen on three levels, and all the measures were taken in the erect position, and for later measurement marked with nitrate of silver.

First, across the navel and behind, corresponding nearly with the upper edge of the os sacrum; second was marked five centimetres above the first level; third was marked ten centimetres above the first level.

The circumference of the first level was ninety-eight centimetres, of the second was eighty-nine centimetres, and of the third was eighty-four centimetres.

The diameters, measured with a *compas d'épaisseur*, were, in first level, thirty-one centimetres; in second, twenty-nine centimetres; and in the third level, twenty-six centimetres.

The distance from the lower end of the processus xiphoideus to the symphysis ossium pubis was forty-six and a half centimetres. Distinct fluctuation could be felt over the whole abdomen up to the regio ventriculi. Percussion was dull from the ribs to the regiones inguinales; resonant only in the regiones lumbares and over the stomach. By vaginal touch, the uterus was found to be of normal size, movable, and pushed *backward.* Patient's sleep very restless and interrupted; digestion, respiration, and circulation almost normal; pulse small and somewhat rapid.

The method of treatment was the following: In the regio iliaca dextra a slightly-oiled, exploring trocar and canula was pushed through the abdominal walls into the cyst, the trocar removed, and a steel wire connecting with the copper pole of a galvanic battery—insulated nearly to the free end by means of a coating of varnish—was introduced through the canula, so that a small portion of the insulated part of the wire projected beyond the canula into the cyst. The zinc pole, in the shape of a broad, muslin-covered electrode, moistened, was applied to the left side of the abdomen.

My reasons for not using the insulated needle, described in my paper on the treatment of hydrocele by galvano-puncture,[1] are the following:

1. I had not yet been able to find an insulating cover for the needle that does not deprive it of smoothness, or renders it too thick, or which would not, after remaining in the punctured wound for some time, irritate it; or, becoming soft and sticky from the warmth and moisture, the withdrawal of the needle would be difficult and painful.

2. Frequently, in albuminous fluids, coagula are formed on the positive pole; and how firmly they may adhere to the needle on its withdrawal, and whether any parts, that could not pass through the canal with the needle, would peel off easily, or meet with considerable resistance, could not *a priori* be stated. For, by such a procedure, the punctured wall of the cyst, and in this case also the peritoneum, would be exposed to more or less injurious mechanical irritation.

All of these inconveniences are avoided by the use of the canula, for the wire, being introduced through it, does not touch the walls of the punctured wound; and, on removing the wire from the fluid of the cyst, the adherent coagulum is peeled off by the somewhat cutting extremity of the canula, without any danger of irritation of the cyst-wall, though the resistance may be considerable.

3. I use steel wire, because wire as small as required, made of a soft metal like gold or silver, is liable to bend, thereby hindering withdrawal. It is of very little consequence that a portion of the galvanic current passes over to the canula, since this has a slight coating of oil.

My leading idea on galvano-puncture is based on Wiedeman's words,[2] "The fluid through which a galvanic current is going, interrupted by a porous wall, moves through this wall in the direction of the positive currents." And again,[3] "The quantity of the fluid transmitted through the porous wall, in equal periods of time, is directly proportional to the intensity of the current, and independent of the surface and thickness of the porous wall, under otherwise equal conditions." This capacity of transmission is inversely proportional to the conductibility.

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[1] *Berlin. klin. Wchschr.*, 1865, No. 38.

[2] "Lehrbuch der Elektrizität," p. 376.

[3] Id., p. 379.

The organic tissues may be considered as such porous walls, and the quantity of fluid in them, with its salts, may be looked upon as the measure of their conductibility. The epidermis, being generally very slightly moistened, opposes a great deal of resistance, therefore, a great number of elements is required.

The fluid conveyed out of a cyst by means of the galvanic current is thus returned to the circulation, most probably in an altered quality, and afterward first secreted and then excreted.

There is no doubt of simultaneous electrolysis, as the traces of polarization are to be observed on the electrodes, yet it is no less certain that electrolysis is the least effectual of the two phenomena.[1]

The above treatment was commenced in this case November 21, 1868, and continued on almost every other or third day.

November 21st.—Puncture very painful, with consequent fainting-fit; application of the current no longer than eight minutes. Current of a moderate strength; eighteen elements. Patient does not perceive the usual burning sensation from action of the current. She, being advised to apply at her home wet cloths to alleviate any pain at the seat of puncture, was compelled to do so after each of the first three galvanic applications, for about six to eight hours, but subsequently hardly for one to two hours, and sometimes not at all.

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[1] Dr. Van Langenbeck's objection during the discussion of this paper, that fibrous membranes, and in our case that the cyst-walls, were deprived of the faculty of absorption, is refuted by a case of Dr. Edmund Rose of Zürich, where, shortly after the injection of fluid containing iodine into an ovarian cyst, iodism occurred. Besides, it is known from many galvano-therapeutic experiences that, by galvanism, the faculty of resorption by the tissues is increased far more than by iodine. I will mention, many tumors are treated in vain by iodine, internally and externally, that were not diminished except by the influence of the constant current.

23d.—Had yesterday less pain, but several fainting-fits. Measuring the circumference of the abdomen, on the levels mentioned above, I found a decrease of two centimetres. Gave another galvano-puncture, the current lasting fifteen minutes, followed again by a deep fainting-fit.

25th.—Pains in abdomen, in spite of application of wet cloths, all day and night, and great restlessness on the 23d. Yesterday, patient observed the escape from the genitalia of a limpid fluid amounting to about four ounces, a symptom which has not appeared for a long time. Circumference of abdomen one centimetre more than the last time. A third application, lasting eighteen minutes, but no fainting-fit.

27th.—On the 25th, there were diarrhœa and watery discharges from the genitalia. On the 26th, she had eight fluid stools; but it is here proper to mention that the patient was subject to diarrhœa after psychical emotions, which generally improved without remedies. Circumference about two centimetres less than last time. Fourth application of the current, lasting twenty minutes; twenty-five elements. Slight sensation of warmth at the zinc pole.

29th.—The diarrhœa continued on the 27th and 28th; the patient evacuated more urine than usual, viz., more than three pints during the twenty-four hours of the 27th, and a little less on the 28th, while heretofore she usually excreted hardly one-half of this quantity. She slept well on the night of the 27th, not having done so for a long time. Abdomen softer; movements somewhat easier, but great debility. Circumference diminished only in the third level only one centimetre. The fifth, and each subsequent application of the current, lasted each time half an hour.

The treatment was continued in the same manner; the number of the elements was gradually increased to forty, without causing any inconvenience to the patient. The dimensions of the belly decreased more and more; its upper part, chiefly, became softer, lost its shining and tense appearance, and became rugous. The patient experienced more and more alleviation and relief from the sensation of fullness, and, since the 27th, an increasing emptiness about the stomach; her appearance improved, her strength augmented, the fainting-fits disappeared, and she slept excellently. The fluid discharges from the genitalia have not appeared since the third application. The quantity of urine evacuated on the days of galvanic application was much greater than during the interval. Since the 29th, the diarrhœa diminished by degrees, without use of remedies.

On December 14th, Dr. Schöller noted the significant diminution in the size of the abdomen, and of the quantity of its fluid contents, as Dr. Lohde had often taken opportunity to do before.

Notwithstanding some mental excitement, caused by preparations for Christmas, causing varied effects on the patient's condition, the size of the abdomen became gradually smaller, though it is not to be denied slight fluctuations occurred, most likely caused by the occasional distention of the intestines with solid, fluid, or gaseous contents.

The good effects of external treatment, which other electro-therapeutists, as well as I, have seen in many instances of different kinds of tumors, induced me to treat this case by this method the fourteenth, sixteenth, eighteenth, and twentieth times, and the progress of the improvement from this intermediate treatment was obviously about the same as from the treatment by the galvano-punctures.

January 9, 1869.—The following measures were found: First, Circumference on the first level, 83 centimetres; on the second, 74 centimetres; and on the third, 67 centimetres, against 98, 89, and 84 centimetres, measured before galvanic treatment; showing, therefore, that a decrease respectively of 15, 15, and 17 centimetres had taken place. Second, Diameter from the navel to upper edge of os sacrum, 25½ centimetres; in the second level, 24 centimetres; and in the third, 19½ centimetres, against 31, 29, and 26 centimetres before treatment; showing, therefore, the respective differences of 5½, 5, and 6½ centimetres. By palpation, the upper margin of the tumor can be felt as a distinct ledge, about four centimetres above the navel, but losing itself laterally; and, in the same proportion that the tumor has decreased, the resonance has increased from above, and on the right side of the abdomen toward the median line as far as a vertical line drawn from the mamma, but not so on the left side.

The circumference having also diminished in the level of the navel, when the fluid still projected above it, was very likely caused by the coincident diminishing of the quantity of the fluid as well as of its vertical and lateral pressure, and therefore the contractility of the abdominal muscles existed to a greater degree than under the previously higher vertical and lateral pressure.

The patient, on January 9, 1869, came to my office quite well, painless, and in good spirits, boasting that her belt and dress-waists, worn by her in fair health, were hardly inconvenient to her. She felt well during and after the external application of galvanization that day, and left my office at 10 o'clock A. M., in a comparatively good condition, making, as usual, a ten minutes' walk, in order to reach the stage, which carried her home in half an hour. She felt well the whole day, as she and her relations asserted to Dr. Lohde and myself; but the same evening she experienced, suddenly, without previous symptoms, a fainting-fit, with subsequent chill, and pain in the abdomen, chiefly on her left side, severe, and increasing on the slightest touch, and also pains in her legs; great distention of the abdomen; small and frequent pulse; fluctuation over greater surface than before; great prostration of her strength; very great thirst, and no appetite at all; tongue coated; no nausea, but small quantities of fluid food causing great uneasiness and eructation; urine dark, very muddy, and full of sediment; sensorium clear.

Notwithstanding the energetic treatment of Dr. Lohde, her strength failed, but the pains, distention, and fluctuation of the abdomen lessened, and for a short time the hope of resorption was entertained.

The nightly exacerbations deprived the patient of her rest more and more, but she was relieved for a short time by large doses of morphia.

On the 14th of January, 1869, vomiting of stercoraceous matter occurred, at first in small quantities, but by degrees increasing, till the death of the patient on the 18th.

In spite of our united solicitations, the husband could not be induced to allow an autopsy, which would surely in many respects have proved very interesting. I was particularly anxious to learn the cause of the sudden and fatal attack of peritonitis.

The following remarks seem worthy of mention: Before and at the beginning of the galvanic treatment there escaped from the canula a serous, albuminous, brownish fluid, which, as it decreased in quantity, became thicker and limpid; but after about the tenth application it turned to a clear, light yellow.

On withdrawing the steel wire through the canula, I met with no obstacles, and to the free end there was no trace of coagulum adherent; but this end, every time it was withdrawn, was blackened and somewhat corroded by polarization. The withdrawal of the canula was never attended with difficulty, and its end never exhibited any change of color, or any traces of coagulum.

Unfavorable as this treatment was in its issue for the first time, I cannot but recommend it for further trials, but with the precaution to undertake it either in the patient's home or in a hospital.

ART. VI.—*Typhoid Fever and Drinking-Water.* By JULIUS A. POST, M. D., Rochester, N. Y.

SOME time during the early part of September last it was noticed that typhoid fever was confined to a particular part of this city (Rochester). The Board of Health took the matter in hand, and proceeded to investigate, with the following results: Most of the persons who were sick used water from a well which was located at a four-corners, and situated directly in front of a grocery and lager-bier saloon. This well was a famous watering-place for farmers and teamsters, who generally left their teams standing near the well, while they went into the saloon for their accustomed glass of lager. In this way the well received the surface washings, not only from the road, but from small cesspools of urine, manure, and filth, which had accumulated around it. The Board of Health caused the well to be closed. This action on the part of the Board caused much excitement throughout the neighborhood, especially among those who used water from the well. At this stage of proceedings, Prof. Lattimore, of Rochester University, kindly volunteered to analyze some of the water taken from the bottom of the well, and also from the surface of the water. His report being of a negative character, and showing nothing there which would be injurious to health, the people again became clamorous to be allowed to use the water. To settle the matter, the Board of Health determined to make a house-to-house inspection, as it was evident that science and hygienic laws were at variance somewhere. Taking the well as a starting-point, each house in the neighborhood was visited, as far as any persons could be found who used the water. A large district was included, presenting about the same features as to drainage and sanitary conditions. The results of inspection were as follows: There were forty families who used the water from the well at the corners; these forty families contained two hundred and nineteen persons; in these forty families there had been, during the past season, twenty-three cases of typhoid fever, and one case of consumption—in all, twenty-four cases of sickness. In the district inspected there were forty-seven families, who used water from wells in their own or their neighbors' yards; these forty-seven families contained two hundred and seventy-one persons; in these forty-seven families there had been, during the past season, one case of dysentery, two of typhoid, one of pneumonia, one of whooping-cough, one of disease of the kidneys, and two sick for a few days, but did not call a physician—in all, eight cases of sickness. Comparing the diseases of a zymotic character in the forty families who used water from the condemned well, and diseases of the same nature in the forty-seven families who had water from wells better protected, we can draw but one conclusion. After closing the well there were no more cases of typhoid in that neighborhood than in any other part of the city. The case is a very interesting one, and only proves the more conclusively that wherever typhoid fever makes its appearance there is a direct violation of some sanitary law, and that a chemical and microscopical investigation is not, in all cases, sufficient to warrant the opinion that water taken from certain sources may not be, of itself, the direct cause of disease.

Clinical Records from Private and Hospital Practice.

I.—*Notes of a Case of Dynamite Explosion.* By Oscar J. Coskery, Professor of Surgery in the College of Physicians and Surgeons, Baltimore, Md.

Daniel H., aged fifty-three, a "navvy" belonging to a night-gang of workmen employed in opening a tunnel near this city, was admitted into St. Joseph's General Hospital at 11.30 p. m., on November 11th, suffering from the effects of an explosion of dynamite; was first seen by me at 1.30 a. m. of November 12th, or three hours after the explosion. Patient was then evidently recovering from the shock. His pulse was full and moderately strong (90); respirations normal; skin cool but not cold (had a chill when admitted, but under the administration of whiskey this had passed off). On examination of surface the following injuries were found: The anterior fourth of the hair of his head was burned off close to the scalp; the eyebrows and most of the whiskers gone, and over forehead, under part of nose, and cheeks, were scabs of clotted blood, generally about the size of a split pea. The eyelids of both eyes much swollen, but right cornea was clear. The conjunctiva of left eyelid greatly congested, indeed purplish, swollen, and the patient complained of a feeling of "sand" in that eye. The left cornea was decidedly hazy, but patient expressed himself as seeing equally well with either eye. Anterior surface of both arms, more especially the right, burned in many places, the burns varying from simple red streaks (as if a heated body had been drawn rapidly over the surface), to vesications, and even deep charring. The clothing in places corresponding to these burns was perforated by round, charred holes. The hands were very extensively vesicated, but there was no deep implication of the skin. The trunk escaped entirely, but the coat was also burned in round holes. The penis was bruised and ecchymosed its whole length, and the prepuce vesicated in one spot. The inner side of each thigh was streaked in long shreds, but there were no vesications. The left leg escaped. The right leg was vesicated nearly its whole length in front. Besides the burns, both bones of this leg were badly comminuted about five inches below the knee-joint. There was a lacerated wound about two inches below the knee, which led down to the bone, but not to the fracture; there were also two small but deep lacerated wounds of the right foot. (The physician who saw the case at the time of injury told me that he extracted several pieces of charred wood from these openings, and I also took one piece, measuring one-half by one-third of an inch, from one of the wounds of the foot.)

The mode of production of the accident was as follows, given me by the patient himself: He was sitting on a box by the (left) side of the foreman of the gang, whose duty it was to see that the cartridges were properly made, and who also attended to the placing and firing of them. (These cartridges were made by filling a tube of oiled paper, one inch by ten in size, with dynamite, into the centre of which a gunpowder fuse led, the lower extremity terminating in a cap filled with fulminating powder, the upper end of the fuse hanging freely out of the tube.) The foreman had one of these cartridges in his hand, and, thinking the fuse was not good, applied a lighted lamp to it; the result was, the instantaneous death of the foreman (he was disemboweled among other injuries), and that Daniel H. was blown backward ten feet, receiving the lesions above described.

Forty-eight hours after the injury the man had fully recovered from his shock, with no amount of reactionary fever, but under many of the blood-scabs pus had fully formed, and upon removing the crusts this pus was discharged with some dead cellular tissue, the skin evidently being destroyed in its whole thickness. Many of the bullæ had burst and left healthy surfaces, others were degenerating into pus. On account of the great tendency to overriding of the fragments of the fractured tibia, and the necessity for repeated dressings to the wounds of the leg, I applied the splint described by me in a late number of this Journal, with perfect satisfaction. The edges of the lacerated wounds were gangrenous for a considerable distance around, and the haziness of the left cornea was decided. On the sixth day a superficial, small ulceration had made its appearance on this cornea, and there was great pain (ciliary neuralgia). The man is at the present time of writing (November 22d) doing very well, the corneal sloughing having ceased, although the profuse suppuration of many of the bullæ, and of the lacerated wounds, together with the dangers to be apprehended from the fracture, makes me careful about being too sanguine of his recovery. Up to this time he has not had a dangerous symptom.

I have thought this case worthy of being put upon record—1. Because of the frequency with which this terrible explosive is being used; 2. Because of the fact that the effects were so different from those produced by gunpowder explosions. The man evidently suffers most from the burns, and not from the concussion; 3. Because from the burned holes in his clothing, and the scattered vesications and deep charring in spots, I believe that dynamite, at least in the open air, when exploding, sends off red-hot globules of different sizes, and it was through their falling upon the surface in different stages of incandescence that the effects were manifested in this case. Another point of interest was the rapidity with which pus was formed.

December 7th.—Since last note (November 22d) the patient has been going on well. The visications have dried up, with few exceptions, some discharging pus, others not. From the face and side of the head three several pieces of the cap belonging to the fuse have been extracted, and from the hands, legs, and foot, several pieces of charred wood. Other small foreign bodies have become encysted and give no annoyance. The corneal opacity has entirely cleared up, and the conjunctival congestion disappeared. In a word, the patient is getting well rapidly.

II.—*Paracentesis Thoracis in a Child Two Years of Age.*

By Edgar Holden, M. D., Newark, N. J.

The following case, which has gathered interest by contrast with later ones, is published as a contribution to the clinical history of paracentesis, and seems deserving of record both because of the youth of the patient and the fortunate result of the operation.

The child, a boy, A. K., aged two years and two months, was brought to me June 14, 1873, suffering from supposed tuberculosis pulmonum, in its last stages, and no more terrible results were ever wrought by that dreaded disease than were visible in the poor, emaciated, helpless spectre of an infant lying on its pillows. Hectic, sweatings, and a colliquative diarrhœa, had reduced him almost to death, and his pitiful moans were nearly inaudible. His illness was of three months' duration, beginning in the preceding March. Upon baring the chest with the desire of at least appearing to investigate the case, out of sympathy with the parents, believing it to be tuberculosis, I was struck with the want of symmetry of the two sides of the thorax, and involuntarily slipped my hand down the spine in anticipation of curvature. Finding none, it required no careful examination to be satisfied that unilateral empyema existed, even to the extent of producing immobility of the chest-wall, and a crowding of the heart to the right, and the diaphragm deeply downward into the abdomen. The jugulars of both sides were knotted and prominent, and pulsated visibly with each systole of the heart. Satisfied that no time was to be lost, the dyspnœa being very great, the cough constant and harassing, with inability to retain food of any kind, the following day was appointed for the operation. From notes of the case it appears that the temperature was 106° and the pulse about 150.

Aspiration was attempted, but, on plunging in the trocar, so great was the pressure that pus gushed by the sides of the instrument. In a short time forty-eight ounces were collected in the receiver and a bowl that was brought into requisition. No syncope followed this excessive discharge, but immediate relief.

Failure in the attempt at aspiration induced us simply to allow the pus to flow through the canula, and, when it ceased, to insert a larger one of the size of a No. 10 bougie (English scale). When the flow from this stopped, a Chassaignac's drainage-tube was inserted, a poultice applied, and six grains of Dover's powder administered.

June 18*th*.—Improvement had so far resulted that the appetite had returned and the fever to great extent subsided, the pulse remaining still high (140), the temperature being 100°, and the respiration much reduced in frequency. Iron, cod-liver oil with lime, milk-punches with broths, beef-tea, and farinaceous food with milk and eggs, were freely administered.

28*th*.—Fourteen days after operation the discharge diminished, and hectic supervened. It now seemed best to adopt the open treatment so highly commended by Dr. Bowditch, and with a blunt-pointed bistoury a free incision was made on each side of the punctured opening, about the width of two fingers (an inch and a half), with the result of freeing a large quantity of flocculent and coagulated material, streaked with blood. From this time until the discharge had nearly ceased, the wound was kept open by the occasional introduction of sponge or sea-tangle tents, and freely washed out with carbolized water.

In the following December, six months from date of operation, pus was expectorated in considerable quantity, amounting during the twenty-four hours to about two ounces, sometimes laudable and inoffensive, sometimes streaked with blood and of a sickening odor. The patient was, however, steadily improving, running about, with reasonable appetite and strength. Cough severe again and paroxysmal. He was now brought to the office at intervals of from three to six days.

December 27*th*.—The discharge from the wound was distinctly aërated, and, while in the office during a paroxysm of coughing, air could be heard to rush from the wound. This continued for four days, the expectoration of purulent matter continuing, and no new symptoms presenting themselves.

January 10, 1874.—The exit of air had ceased for a little over a week, the wound having also nearly ceased to discharge. It was therefore decided to allow it to heal.

February 1*st*.—Cough almost gone, no longer any pus in expectoration. Thoracic wound healed, child apparently well. During the month preceding, and since the discovery of the escape of air, lager-beer was given in large quantities, the child being allowed to satisfy his thirst *ad libitum*.

February, 1875.—The boy was again examined, to ascertain the condition of the lung. The chest was contracted, the lung which had been crowded into the upper part of the chest-cavity being inflated by inspiration only to the inferior angle of the scapula. No *râles* or creaking sounds, but dullness at the point named, and abnormal resonance below. The child has attained more than the usual weight for his years, being robust and well.

February, 1876.—Vesicular murmur audible over a nearly normal area. The evidences of fibrous bands of contraction and effusion entirely absent. This condition continues up to present date, when opportunity has been again had of examination, a long bluish cicatrix alone remaining to show the site of operation.

In this case the youth of the patient, the amount of accumulation, the disturbance of venous circulation and obstruction at the right auricle (as evidenced by the knotted and pulsating jugulars) by empyema of the left thorax, the escape of air from the wound at a late stage of the drainage and its continuance for a brief period unaccompanied by adverse symptoms, the opportunities for examination of the patient at intervals until complete restoration of function had occurred, have made the case appear of unusual interest.

The duration of illness prior to operation was from March (exact date not recorded) to June 14, 1873, a period of about thirteen weeks; of continuance of discharge from the wound, seven months; of discharge from the natural air-passages, from about the middle of December till the latter part of January following.

III.—*A Case of Bright's Disease of Mechanical Origin; Relief by Operation.* By Samuel B. Ward, A. M., M. D., Professor of Surgery in the Albany Medical College, Surgeon to Albany City Hospital, etc.

Mrs. C. B., aged fifty-eight, American, widow, having a good family history in every way, contracted while residing in China, twenty-five years ago, a diarrhœa, which became chronic, and has had for years past from five to ten movements in the twenty-four hours, being frequently compelled to rise from one to three times at night.

On August 5, 1876, I was sent for to visit her on account of an acute aggravation of her bowel-trouble, apparently dependent upon the fatigue incident to a trip to Philadelphia during the very hot weather. Finding that whatever she ate was passing undigested, lacto-peptine was ordered, and after three or four visits she expressed herself as so much relieved that attendance was discontinued.

On August 14th I was sent for again, and found that she had been very imprudent in her diet, and was much worse than when I first saw her—in fact, was seriously ill. The administration of twenty grains of calomel caused a very decided improvement in her condition within a few hours, and, after taking tonics and aids to digestion for a few days, her bowels returned to their habitual condition, and gave no further trouble.

One of the last days in August, at the request of a member of her family, she told me that she suffered severely, at times, with a neuralgia of the left shoulder; that she had curious sensations in her throat, such as led her to suspect that she might have a cancer there; that she had a good deal of dizziness and many unpleasant, indescribable sensations in her head; that she heard unnatural sounds in her ears; that she frequently saw a black cloud, and occasionally bright spots, floating before her eyes; and questioning concerning the urinary function brought out the facts that she was obliged to pass water about every two hours, night and day; that only half an ounce to an ounce was voided at a time; that passing this amount occupied from five to fifteen minutes, the urine escaping only drop by drop, while the act was accompanied by considerable effort and pain; and this condition of things began some years ago, and had been gradually growing worse. Subsequent examination of the urine showed it to contain albumen, the precipitate, after boiling and the addition of nitric acid, settling down to one-fourth or one-fifth of the bulk; the specific gravity was 1008; and the presence of hyaline and granular casts in large numbers was confirmed by the observation of my friend Dr. E. R. Hun. This, however, did not account for the length of time occupied in urination, and on September 1st Dr. James P. Boyd, Jr., saw the patient with me in consultation for the purpose of making a physical examination. We found the vagina so small as to admit the index-finger only with difficulty; the uterus retroflexed and atrophied, with a well-marked conical cervix; and it was only after considerable search that we were able to find the orifice of the urethra, the meatus being covered over with a dense membrane, the opening in which would only admit an ordinary silver probe. Without much difficulty a director was substituted for the probe, and with a bistoury we made an incision downward and outward on each side, parallel with the ramus of the pubes, after which a full-sized gum-elastic catheter could readily be passed into the bladder. To prevent any recontraction, the catheter was passed every day for the first week, and every second day during the succeeding ten days, when its use was discontinued. After the trifling operation the patient experienced no delay in passing water when necessary, and no trouble in doing so except a slight burning pain during the first few days. Gradually she became able to retain her urine four or five hours during the day, and was not obliged to rise at night. The after-treatment was of the simplest possible kind, consisting of the administration of tonics—iron, quinine, and strychnine.

The patient was quite weak for some days after the operation, but gradually gained strength, and, little by little, all the disagreeable symptoms on the part of the nervous system disappeared. Ten days after the operation chemical examination showed the urine to be free from albumen, and the microscope revealed only a few casts.

October 6th—just five weeks after the operation—it was not possible to find a single cast. The patient says that she feels better than she has at any time for four or five years past; is going all over the house at her pleasure; and the diarrhœa of so many years' standing is also disappearing, the number of passages having been reduced to about two in the twenty-four hours.

November 10th.—Examination of the urine shows it to remain free from both albumen and casts. For two or three weeks past she has been going to church and about the streets in pretty much her usual health, the only remaining symptoms being that she occasionally has some slight unpleasant sensations in her head and shoulder. The condition of her bowels has so changed that she is occasionally obliged to take a laxative.

Remarks.—The interest in this case centres in the fact that the unpleasant and dangerous symptoms, on the part of the nervous system and intestinal tract, seem to have depended upon the Bright's disease. This latter, in turn, seems to have been of purely mechanical origin, depending upon the urethral obstruction. The violent contraction of the bladder which was necessary to overcome this, probably also forced back the urine through the ureters into the kidneys, and gave rise to the trouble which there existed. The diarrhœa appears to have been only a compensation for the non-performance of their function by the kidneys. Certainly all the abnormal symptoms, some of them of many years' standing, almost entirely disappeared soon after the removal of the obstruction to the flow of urine.

IV.—*Encephaloid Cancer of Left Kidney in a Child Two Years Old.* By J. C. Carlisle, M. D., Pinesville, Ohio.

Late in July, 1876, I was requested to see Emma M., aged two years. Her parents are healthy, and she had been in perfect health until the previous March; she then became fretful, vomited occasionally, and evinced pain in the abdomen, especially if pressure was made. At the date of my visit she was emaciated and cachectic; appetite was variable; her bowels were usually constipated. I found upon examination an abdominal enlargement, which appeared to start from the left hypochondrium, extending upward under the arch of the diaphragm, interfering materially with the action of the left lung, and obliquely downward into the right inguinal region. In fact, the growth could be distinctly traced into every portion of the abdominal cavity excepting the right lumbar, right hypochondriac, and a portion of the epigastric regions. No fluctuation could be detected. On percussion a dull sound was elicited over the entire mass, except a space about one inch in width, extending in an oblique direction from near the centre of the epigastric region to the left iliac fossa; here percussion yielded a clear sound. Hæmaturia was at no time present. The urine was voided frequently in small quantities, and was found upon microscopic examination to contain multitudes of vibriones; specific gravity 1010; a trace of albumen was present; there were no uremic symptoms. The decubitus was on the left side, no doubt, because adequate respiration required the free action of the right lung, aided by all the auxiliary muscles on that side of the chest. The child was able to walk about the house until the middle of July. The case was seen on several occasions by Dr. H. C. Beardslee, of this place, and once by Dr. O. A. Dimmick, of Chardon. On the morning of October 18th she was found dead in her cradle, the whole progress of the disease having been about seven months, the usual duration of the affection in children, as given by Roberts.[1] The following morning Dr. O. Pomeroy, of Chardon, and myself, made a careful dissection of the case. The abdomen measured twenty-nine inches in circumference. On laying open the peritoneal cavity several ounces of dark-colored serum escaped; the peritonæum itself presented some evidence of inflammation. The morbid growth occupied the entire abdominal cavity, with the exception of the right lumbar, right hypochondriac, and a portion of the epigastric regions, into which the intestines, stomach, and liver, were crowded. The latter was healthy in structure and color. The hepatic flexure of the colon was distended with gas; the descending portion (corresponding with the clear sound obtained on percussion during life), containing hardened fæces, was firmly bound in a groove on the anterior surface of the morbid growth, which groove appeared as a continuation of what undoubtedly was the hilus of the kidney when in a normal condition. The principal portion of the pancreas was adherent to the upper and lateral portion of the tumor; it was pale in color, and had undergone a granular degeneration. The left lung was collapsed, and the chest-wall on that side contracted. The spleen, which was pushed high up under the arch of the diaphragm, was normal in appearance.

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[1] Roberts, "On Urinary and Renal Diseases," second American edition, p. 525.

The left ureter was atrophied, and not more than one inch in length; it appeared as a continuation of the fibrous investment covering the mass. The bladder was small, being encroached upon by the growth, and contained several drachms of decomposed urine. The tumor, which weighed seven pounds, was dissected out of the abdominal cavity without much difficulty, as its adhesions were not extensive; it was covered with a thick fibrous capsule, which was exceedingly tough, cutting almost like leather; on its surface were several semi-transparent points, containing a colloid material; on the lower and anterior portion of the tumor, along the attached border of the descending colon, was a chain of mesenteric glands, fifteen in number, which were large, indurated, and contained secondary deposits. Vessels, evidently the renal artery and veins, entered the growth in the groove on its lateral surface; the groove or constriction spoken of gave to the tumor a peculiar shape, it presenting the form of an hour-glass, the lower portion being much the larger; a section of the mass displayed a typical specimen of encephaloid growth (infiltrated). Above the constriction extensive disintegration had taken place; on laying it open a considerable quantity of dark, grumous fluid escaped. The lower portion of the tumor appeared to have undergone fatty degeneration, with the exception of a portion the size of a pigeon's-egg, in which the microscope detected tubuli uriniferi.

The right kidney was healthy in structure, but somewhat increased in size. In this case the malignant growth was not equal in size to several of those mentioned by Roberts, or, in proportion to the age of the patient, to that in the case of Prof. Mott[1]; but it seems worthy of being placed on record, as showing the value of physical signs in diagnosis, and as confirming the opinions heretofore entertained in regard to its rapidity of growth; it also furnishes another instance of the entire absence of hæmaturia, and an instance, I believe, not before mentioned, of the occurrence of vibrio in the recently-voided urine.

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[1] Flint's "Practice of Medicine," fourth edition, p. 834.

V.—*A Case of Migrating Lipoma.*[1] By B .B. Brown, M. D., Baltimore, Md.

A lipoma, weighing two ounces, was removed November 10, 1876, from the neck of a colored woman, aged sixty-five. The tumor was situated between the sterno-cleido-mastoid and trapezius muscles, with prolongations extending downward under the clavicular portion of the trapezius. When first noticed, about twelve years ago, the tumor, about the size of a walnut, was situated behind and a little below the right ear; it gradually moved down toward the shoulder, and had been in the situation from which it was removed about five years. Paget relates the case of a patient at St. Bartholomew's Hospital, from whom a strange-looking pendulous fatty tumor in the perinæum was removed. It hung like a pocket-flask between his scrotum and thigh; ten years before it was in his groin.

Lyford reports a case in which a large fatty tumor began to grow in the abdominal wall, midway between the spine of the ilium and the pubes; it gradually moved down as it enlarged, and was removed from the upper and inner part of the thigh. Erichsen also mentions a lipoma that descended from the shoulder to the breast.

Notes of Hospital Practice.

BELLEVUE HOSPITAL.

Gunshot - Wounds of the Abdomen; Recovery.—Gunshot-wounds penetrating the abdominal cavity have always been of interest to surgeons, and particularly military surgeons; but since the shooting of Fisk, and the diverse testimony given by surgeons at that time in regard to treatment, they have assumed an important bearing to civil surgeons also, who feel that at any time they may be called to give testimony as experts. The two cases recorded below prove that a patient may have general peritonitis following penetration by bullets, and withal recover, even in a hospital atmosphere.

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[1] Specimen exhibited to the Baltimore Clinical Society, December 1, 1876.

The first case was a man aged thirty-seven, and a bartender by occupation. He was a moderately hard drinker.

On November 8th, at 5 P. M., he was shot by a pistol-bullet, and entered hospital at 10 next morning. On examining the abdomen the ball was found to have entered the abdominal wall in the left lumbar region, and from an inspection of the wound, together with the history obtained from the patient, it would seem that the direction was upward and to the right; it was not considered justifiable, however, to introduce a probe to verify this opinion.

The patient was given stimulants, and a sufficient amount of morphia by the mouth to quiet the pain. The breathing was thoracic and labored; the pain was severe; there was, moreover, vomiting and hiccough.

On the following day, November 10th, the pulse was 120; temperature 99¼. The patient slept for a short time, but developed the symptoms of general peritonitis about sixty hours after the receipt of the injury. The morphia was increased or diminished according to the severity of the pain.

November 12*th.*—Tympanites increased till the wall was tense as a drum-head. Vomiting continued. Temperature, 100½°. Enema of turpentine given.

13*th.*—General condition of patient improved.

14*th.*—Pain increased; does not look so well.

15*th.*—Improved.

16*th.*—Still improved. Two ounces of pus passed from the opening. Temperature, 100°.

17*th.*—Pain worse.

18*th.*—Temperature, 100°; respirations, 22. In the evening had a natural passage.

21*st.*—The condition has been steadily improving.

December 1*st.*—Convalescence continued, and resulted in recovery.

The second case was that of a boy, reported in the Hospital Notes of the last number of the JOURNAL. The patient was shot in the left lumbar region, and recovered after passing through an attack of peritonitis. Both of these cases were under the charge of the house-surgeon, Dr. Woodruff.

Complete Rupture of Urethra; Retention of Urine.—A case of considerable interest has recently been under treatment in the hospital, and shows what result may ensue from injury to the perinæum. A patient, aged twenty-two, while working on a canal-boat, fell astride a board, and received a severe contusion in the perineal region. Shortly after the injury the patient urinated without difficulty, but found that the urine contained blood; afterward, he was unable to pass his water, and remained for about two days without treatment. When he was taken to hospital the bladder was found distended with urine, and reached up nearly as far as the umbilicus; there was also extravasation of urine in the scrotum and perinæum. All attempts to introduce a catheter were without avail, and the urine had to be evacuated by means of an aspirator.

For the relief of the extravasation of urine an incision was made in the perinæum, beginning at the junction of the penis and scrotum, and extending backward to within an inch of the anus. A sound was introduced into the urethra, and the incision carried down to it. The urethra was found to have been completely torn across. Following the operation, profuse bleeding took place, which was controlled by means of pressure made by a Barnes's dilator filled with cold water.

The patient did very well afterward, with the exception of losing by a single slough the whole of the sides of the wound. At the present time a medium-sized sound can be carried into the bladder.

MOUNT SINAI HOSPITAL.

Treatment of Hydro-pneumothorax.—A patient came under observation suffering from pneumothorax of the left chest, and shortly afterward the succussion sound was heard. The previous history of the case was indefinite, but pointed to either croupous or catarrhal pneumonia. There had been an acute attack, which became chronic, but from the collapse of the lung no diagnosis could be made. After the patient had been under observation for two or three weeks, it was found that an opening occurred in the chest-wall two inches above the nipple. An incision was then carried down, and the opening made complete. The fluid was removed daily, and was found to have an exceedingly offensive smell. It was the intention to make a counter-opening, but, inasmuch as this was strongly objected to by the patient, a silver catheter was attached by means of a rubber tube to a stomach pump, and, after evacuating the fluid which had formed during the previous day, the cavity was washed out with a dilute solution of salicylic acid. At the end of a week, the fluid ceased to be offensive, and notably diminished in quantity. The patient, after being confined to bed for three months, was able to get up and walk about, and at the present time shows signs of convalescence. There are some points, however, of obscurity about the prognosis. The first one is, the diagnosis of the exact condition of the lung, which cannot be determined so long as it is in a state of collapse; another one is, whether the very favorable condition which now exists will continue, as the patient is to all intents and purposes suffering from empyema.

Suspected Syphilitic Tumor of the Brain.—There is at present in one of the wards a patient who presents many symptoms which point to a tumor at the base of the brain. The patient is twenty-nine years of age, and denies the existence of a primary lesion. He says that four years ago he took a cold in the head, and had an offensive nasal discharge. On examining the nose, the posterior part of the palate was gone, and there were other evidences which pointed to necrosis of a specific character. He complained greatly of headache, on one side. There were no evidences of any cutaneous lesions, and the patient denied ever having had them. The symptoms which were of most importance were those connected with the eyes. On admission, there were found to be double ptosis and inability to move the eye in any direction, indicating paralysis of the third, fourth, and sixth nerves. There was also marked protrusion of both globes. The sight of the left eye was gone, but that of the right was sufficiently good to read ordinary print at six inches. Any diagnosis of intracranial tumors must of necessity be enshrouded in doubt, but, from the paralysis of the ocular muscles, together with the presence of partial sight and protrusion of the globes, it is but fair to assume that there is a growth situated anterior to the commissure which presses on either orbit. On admission, both eyes had less tension than normal. Since that time, the ptosis of the right eye has slightly improved, but there has developed conjunctivitis, with ulcer of the cornea, due, in all probability, to inability to close the eye.

The treatment has been the administration of the bichloride of mercury with the iodide of potassium.

Fracture of the Clavicle near the Sternum.—Rather a rare case of fracture of clavicle presented itself in the case of a laboring-man. When he was taken to hospital the fracture of the clavicle was found to be situated about an inch from the sternum. The inner fragment was carried into a vertical position, and the other down upon the chest. It was found impossible to reduce them, and, inasmuch as the patient was not inconvenienced by the deformity, he did not complain of its presence. The arm was put up in the usual manner, and the patient was able to leave, and engage in his usual occupation. If the patient had been a young lady in fashionable circles, it might have been necessary to endeavor to reduce the fragment, and this could only be done by section of the sterno-cleido-mastoid muscle. It would seem that the operation most likely to yield a favorable result would have been to enter a blunt-pointed tenotomy-knife along the upper margin of the inner fragment, and cut all attachments to that portion of the bone, and then retain it in proper position by means of appliances. A somewhat similar case came under our observation some time ago, but the fracture took place very near the sterno-clavicular articulation. The patient was not seen for a month after the injury, and then a diagnosis was made with considerable difficulty, inasmuch as the callus had involved both of the fractured surfaces, and gave rise to the appearance of dislocation. There was no tilting up of the inner fragment.

Correspondence.

SIGMUND'S TREATMENT OF SYPHILIS.—EXTENSIVE USE OF MERCURY.—TREATMENT OF STRICTURE.—DITTEL'S USE OF THE ELASTIC LIGATURE.—VESICO-PROSTATIC CALCULUS.—PRIVATE HOSPITALS, ETC.

VIENNA, *September* 10, 1876.

EDITOR OF THE NEW YORK MEDICAL JOURNAL:

IN the service of Prof. Sigmund things have continued in their accustomed way. One hundred and eighteen patients, mostly of bad habits, under mercurial treatment at one time, and not one case of salivation, has its lesson. Is this lesson the superior value of inunction, or of the *régime* adopted? While the inunction method is the pride and glory of the veteran professor, he rather insists that this exemption from salivation is the reward chiefly of the *régime* he rigidly enforces. He believes that with a tooth-brush, chlorate of potash, and industry, salivation can be prevented with certainty, whatever the form, manner, or degree, in which mercury be administered. In every case, several days before beginning a mercurial course, the cleansing of the teeth and rinsing of the mouth with chlorate of potash are combined with its internal administration. During the mercurial course, the internal use of the chlorate of potash is discontinued, but rinsing the mouth with it is repeated every few hours. During several months I have seen only one instance of salivation in the wards, but its explanation was stubborn disobedience of the patient.

Subcutaneous injections of mercury are practised in many cases, the bichloride, cyanide, albuminate, and submuriate, being respectively used, but without any particular rule of selection. The albuminate of Bamberger, said to be incapable of producing abscess, does not sustain its repute; that virtue, together with certainty of action, Sigmund awards only to calomel.

Experiments to determine mercurial impregnation of the air have been in progress in a close room in which patients vigorously practised inunction; the results were negative. In patients under this treatment, however, Dr. Paschkiss, Sigmund's first assistant, has confirmed the finding of mercury not only in the milk and urine, but also in the placenta.

The iodide of sodium here, as elsewhere, is now a good deal substituted for the iodide of potassium when the latter is not well tolerated.

The *Lister treatment* in suppurating buboes is growing in favor. In a hundred cases so treated, Dr. Paschkiss says that there occurred no instance of gangrene, and, on the contrary if already existing, with the adoption of this treatment it soon disappeared. It cannot fail to be observed, however, that in cases of any gravity the old gypsum-and-tar preparation is still the favorite dressing. Though it is more than forty years since Prof. Sigmund commenced his service in these wards, the old habits of diligence continue, personal notes being made by him of every case that enters. His daily hospital rounds are generally completed before doctors in New York have finished their breakfast.

Notwithstanding the class to which his hospital patients belong, the discipline maintained is equal to that of a military hospital. The daily visit is like a morning drill, in which the nurses, all females, well support their veteran chief in details not here to be described, and which in New York would be deemed shocking and impossible.

In Prof. Dittel's wards are collected the non-specific diseases of the genito-urinary organs and of the rectum. In the professor's private collection of specimens, the variety of preparations of stricture and of hypertrophied prostate, is unsurpassed by any collection of a similar sort. *The treatment of stricture* here is intended to be very conservative, consisting almost exclusively of gradual dilatation on the one hand, and external urethrotomy on the other. Divulsion is shunned, and internal urethrotomy is avoided, patience in dilatation being substituted for both.

The Supra-pubic Method of Bladder-puncture.—Dittel is a strong advocate of this operation, which, unlike Thompson, he makes without any preliminary incision. In forty-one operations he reports but three deaths, and these due to other causes. After a careful and continued observation of several cases, I am more than ever convinced that this operation is entitled to a more general consideration than it has hitherto received.

The *elastic ligature*, it is unnecessary to remark, has here its birthplace and home, and here is to be seen the original skull which was cut through by the elastic band of the child's hair net, before the cause of death hidden beneath her matted hair was discovered. The merits of the elastic ligature naturally continue to be lauded by its inventor, but it is not used even by himself for any operation more extensive than castration. For hæmorrhoids and *fistula in ano*, it is the exclusive treatment. That its constricting action continues until the complete severance of the inclosed tissues is a merit of this ligature never disputed. That it excites no reaction, and gives no pain of consequence, I was sincerely anxious here, in the hands of its inventor, to find verified. Several times Prof. Dittel, at my request, was kind enough to operate so that I might observe these facts; but I am obliged, however, to acknowledge that, whatever the good professor felt, the patients complained of much pain in every instance, and in the last two cases of hæmorrhoids, the patients insisted that they had had no sleep for two successive nights after the operation, and could not be convinced to the contrary. In these cases the ligatures did not come away until the ninth and twelfth days respectively. Notwithstanding the interest which attended the introduction of the elastic ligature, I apprehend its future scope of application will prove less than has been anticipated.

Resections, especially of the elbow, at the large military hospital, as performed by Dr. Neudorfer, appear to be very successful. The point upon which Dr. Neudorfer lays the greatest stress is the application of the actual cautery to the divided ends of the bones. To this chiefly he attributes the fact that after resection of the elbow he never has pyæmia occur. The greatest advantage of the cautery is doubtless the protection against hæmorrhage from the medullary vessels, and the occurrence of decomposing clots thus formed within the wound. The final results which the doctor exhibits are certainly excellent.

In the pathological department, under Prof. Heschel, *single and horseshoe kidneys* have several times made their appearance during the last few months. In one instance the kidney was entirely on the right side of the median line, the ureters crossing each other before reaching the bladder. In another, stranger still, there was but one ureter, and a slight rudimentary suggestion of the other. In the latter case death was caused by cirrhosis of the liver, which was smaller than the spleen.

The physaliden cell, as described by Virchow, and found only at the base of the brain in syphilitic subjects, has in two or three instances been observed lately, the examples of this condition as described being exceedingly good.

Vesico-prostatic Calculus.—The patient, aged thirty-five, had entered the hospital very ill two weeks previously, and was under treatment for cystitis. A calculus was discovered, but, as the patient was so ill, operative procedures were postponed until his condition should be improved. The cystitis, nephritis, and peri-nephritis, revealed by the *post mortem*, were found to be consequent upon a vesico-prostatic calculus. This calculus is seven centimetres in length; four centimetres of it rested in the bladder, one in its neck, and two in the prostate. That part occupying the neck of the bladder had a diameter of five millimetres; in the other two portions the transverse diameters were about equal to their longitudinal diameters. With this large dumb-bell shaped calculus, the prostatic portion as large as a small walnut, and the vesical as large as a small orange, blocking up the urethra, the patient himself had been in the habit of passing a large-sized silver catheter, and listening to the grating as it entered his bladder.

Tuberculosis Urethræ.—This rare condition was found in a subject after death, at the age of sixteen, from general tuberculosis. The tubercular deposit existed in remarkable quantities not only in both lungs, but in both kidneys and ureters, in the bladder, vasa deferentiæ, prostate, and urethra. In the urethra, within two inches of the meatus, as a sequel to the tubercular deposit, were found three good-sized ulcers, one of which completely perforated the urethral mucous membrane.

Duodenal ulceration in death from burns, alleged to be such a frequent coincidence, is not corroborated by the experience here. In two recent cases from Hebra's baths (in which these patients are always placed), and one of which I examined very carefully, no lesion could be found of any part of the intestinal canal, and Dr. Chiari, the able assistant of Heschel, and who conducts all the *post mortems*, says that in not one of the *post mortems* he has had after death from burns has he ever been able to discover the alleged lesion in question.

Craniology and Responsibility.—Quite a little sensation has been created by a paper read before the Verein der Aerzte Niederösterreichs by Prof. Benedict, the object of which, as stated, was to show that in general nobody can be completely responsible for any good or bad action. The paper was a further development of the position he took at the last Congress of naturalists at Grätz.

After extensive personal investigation, Benedict says that the skulls of fifty per cent. of thieves present a high degree of asymetry. In twelve brains examined, nine of murderers, two of habitual thieves, and one a falsifier, the surface of each exhibited signs of abnormal development. Of those conditions principally observed in these and similar cases, Benedict says the most important is the frequency with which the cerebellum is incompletely covered by the occipital cerebral lobes. His conclusion is, that persistent criminals being incorrigible by a physical necessity of their organization, the good of society requires that, instead of a short punishment, a permanent restraint should be more generally substituted in the case of such offenders.

Private Hospitals.—The finest establishment of this kind in Vienna is the "Privat-Heilanstalt" of Dr. Eder. Here strangers and others obtain for a fixed sum (seven florins a day) all the advantages of a private hotel or boarding-house, with the addition of constant medical supervision and general treatment by the resident physician. This institution is a great convenience to specialists, who are sure of their directions being well carried out by good nurses under the constant surveillance of the resident physicians, and is equally a boon to such as come to Vienna for operations, and would otherwise have the choice only of a public hospital or an hotel. It is remarkable that in New York, where the boarding-house is a peculiar institution, no such establishment exists. With a good practitioner, who at the same time combined the faculty of keeping an hotel, such an institution could hardly fail to be as useful and successful in New York as in France and Germany.

Hydro-therapie.—The hydropathic or "Wassercur" establishments, at least as far as I have seen, appear to occupy a closer relationship to the general profession here than with us. At the large establishment, under Dr. Friedmann, at Vöslan, about an hour from Vienna, one meets not only the physicians resident in that immediate locality, but also some of the principal professors of the Vienna University, who consult freely with the resident physicians, or with each other only, respecting the hydropathic or other medical treatment, according to the nature of the case. The chief physician, a gentleman of unusual attainments, is now pursuing observations on the reduction of enlarged spleen by the dry-packing method. The treatment is the simplest form of derivative, and in old malarial cachexiæ the results which I have seen have been very complete, and were attained at a rapid rate without any additional medication.

B. Howard, M. D.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 2, 1876.

Dr. S. S. Purple, President.

How Thirty-five Consecutive Amputations were successfully treated One Hundred Years ago.—Dr. Stephen Smith read a paper on the treatment of amputations practised by Alanson one hundred years ago, and pointed out that the success which attended his method of treatment has not been excelled, and seldom equaled, since. At the time it was received with astonishment, and even now it becomes a matter of admiration, for it appeared that the cases were not selected, but were consecutive in hospital and private practice. Previous to the time of Alanson, the ordinary method of amputation was upon tissues which had undergone mortification, and which of necessity were treated openly. It was true, however, that, in 1679, or one hundred years before Alanson's time, a surgeon, Young, of Plymouth, performed the first flap operation. The operation was not an original idea of his, but was borrowed from another surgeon of Exeter. In Alanson's time, the operation most in vogue was to make a cutaneous incision, retract the flap, and make a section of the muscles above. The operation was then finished by sawing off the bone above the cut muscles. Alanson's modification was to make one single oblique sweep of the knife, retract and saw off the bone, draw out each artery, tie, and sponge the surface with warm water. Dr. Smith said that Alanson's method was essentially that which was known and practised under the name of the circular flap, yet no such results have been obtained as were recorded by Alanson, and it might have been that some of his success was due to the fact that all of the soft parts were separated by a single incision, in such a manner as to leave a conical cavity when the operation was complete. The after-treatment consisted in supporting the stump with a bandage, and placing it on a pillow.

Stated Meeting, December 7, 1876.

Dr. S. S. Purple, President.

Clinical Studies on Phthisis.—Dr. Austin Flint read a classical paper on phthisis, and in doing so proposed to answer a critic who had reviewed his work on the above subject in a recent medical periodical. He said that he was forced into the anomalous position of reviewing his own book, for the reason that the critic had failed to appreciate that, in the collection of medical facts, it did not always happen that they pointed to any brilliant conclusion, or, indeed, to any conclusion at all, but that they served as so much material from which eventually to assist in verifying or disproving any deduction which may have been or might possibly be made.

Dr. Flint's experience in the study of phthisis extended back for a period of thirty-five years, and in that time he had collected notes of a vast array of cases.

In regard to the question, whether tuberculosis might develop in phthisis as a secondary result? He was of opinion that, as a rule, the question should be answered in the negative. Acute croupous pneumonia did not seem to have a direct influence as a cause in producing phthisis, for only a small number of cases were subsequent to that disease. The same was true of pleurisy. His observations tended to prove that bronchial hæmorrhage did not cause phthisis, but he was of opinion that hæmorrhage from the mucous membrane of the bronchi was indicative of a tendency to phthisis. He found, also, that hæmorrhage occurring in phthisis did not point to a speedy and fatal issue.

Recovery was in proportion to the amount of invaded lung, and, moreover, in a certain and considerable number of cases, there was that tendency. When recovery did take place, observers were liable to distrust the diagnosis.

In respect to treatment, he said that, of forty-four cases in which recovery did take place, no treatment was pursued in eight. In regard to the effect of good hygienic surroundings, Dr. Flint thought that they seemed to prolong the time in fatal cases. He rather favored the view that climatic effects were in many cases of doubtful benefit, and that as valuable results might frequently be obtained by having the surroundings everything that could be desired, and keeping the patient at home.

At the request of the president, Dr. Loomis rose and said: "I came to-night to listen, and feel well repaid in hearing the able paper of Dr. Flint. I have read his book on phthisis, and am of the opinion that its value at the present time cannot be over-estimated, as it presents the views of an observer who has studied the disease for so many years, and at a time when the prevalent opinions were much different to what they now are. In the study of the clinical history of phthisis, the first important question that suggests itself is, From what standpoint shall we consider it?

"It seems to me that it should be divided into three forms, and that each of these forms be considered separately, as their clinical history and terminations differ from each other, and, although giving in the main a similar class of symptoms, they are essentially different diseases. The division I referred to is the catarrhal, the fibrous or bronchial, and the tubercular phthisis. If a diagnosis is made as to the variety, we are in a more satisfactory condition to say what will be the chances of recovery, and we can also obtain a more accurate impression as to the value, if any, of therapeutics.

"If a case of phthisis presents himself for examination, and it is found that the disease began with the ordinary symptoms of a cold, and that this cold periodically improved and relapsed, but that the cough never left him, but became more pronounced, and deepened into what we usually find in advanced phthisis, accompanied with emaciation and occasional hæmoptysis, we are in a position to say that the patient presents the usual characteristics of catarrhal phthisis.

"If, however, he gives a history of persistent cough for many years, as is found in chronic bronchitis, and eventually furnishes the rational history of advanced phthisis, with the presence of cavities on the lung, we may consider him as having the disease of the fibrous form, in which cavities are the result of dilated bronchi.

"Finally, if the patient says that an early symptom was emaciation, with impaired digestion, accompanied by a dry, hacking cough, and if, moreover, there was a steady rise in the temperature, we are justified in suspecting the presence of tubercular phthisis.

"In considering the value of the clinical history, an important point is the early diagnosis. Observers differ in the import to be attached to physical signs. One physician may examine a patient and feel convinced that the physical signs point to ultimate phthisis, while another may not feel that such a grave prognosis should be given.

"I examined a young physician, some years ago, who had cough for some months, with occasional hæmoptysis and commencing emaciation. I made the diagnosis of broncho-pneumonia, and was of opinion that he would eventually recover. This opinion differed from that of some other observers, who attributed more gravity to the result. Two or three years afterward he died of a continued fever, and, at the autopsy, the lungs did not show the presence of disease at any point.

"I cannot sit down without again thanking Dr. Flint for the vast array of facts presented, and the valuable deductions which he has drawn."

Stated Meeting, November 16, 1876.

Dr. S. S. Purple, President.

It being the anniversary meeting of the Academy, the Rev. Dr. Ormiston opened the proceedings with prayer.

Dr. W. J. White read a paper on the progress of the profession during the century, and paid a fitting tribute to the influence exercised by medical journals on the minds of medical men. He referred to the fact that only one medical society existed one hundred years ago—The New Jersey Medical Society, which was founded in 1766. Reference was also made to the progress which had been made in pathology, in therapeutics, and in diagnosis, and the marked advance which had taken place. The medical education of our progenitors was also dwelt on, and it would seem, from the facts furnished by Dr. White, that they were frequently ushered into practice without any collegiate training, and without the guarantee of a diploma.

On motion of Dr. Fordyce Barker, a vote of thanks was tendered to Dr. White for his address.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 22, 1876.

Dr. C. K. Briddon, President.

Typho-Malarial Fever.—Dr. A. L. Loomis presented a portion of the small intestine of a patient which furnished the special lesions of typho-malarial fever. The history was as follows: A patient was taken to Bellevue Hospital by the ambulance-surgeon, from a Norfolk steamer. The patient was not in a condition to furnish a history, but, from the observations of the ship-surgeon, it was ascertained that he had come from the State of Maine, and, when received on board of the Norfolk steamer, was ill. During the trip from Norfolk to New York, the temperature rose to 102 degrees. There was also diarrhœa. When he entered the ward at Bellevue Hospital, there was an anxious facies, with occasional attacks of delirium, alternating with unconsciousness. The pupils were dilated. The muscles of the arm were contracted, and those of the back of the neck were so to a degree sufficient to cause a mild form of opisthotonos. The pulse was 68, and the temperature 104°. After admission to hospital there was no diarrhœa. There was no abdominal tenderness, and no vomiting. There was, however, the dull facies characteristic of typhoid. The patient was given twenty grains of quinine every four hours, till sixty grains had been taken, but no effect was observable on the temperature. For the first two days after admission, the pulse was 68, and the temperature $104\frac{5}{8}$°, and on the third day the temperature fell to 102°.

Dr. Loomis said that the diagnosis of the case, with all of the above-recorded symptoms, was obscure. Many of the symptoms pointed to cerebro-spinal meningitis, but the temperature was too high, and there was no irregularity of the pulse. The other symptoms were such as might be expected to be found in typho-malarial fever. The patient gradually sank, without any special change in the symptoms, and died on November 17th, seven days after admission.

Post Mortem.—The brain and spinal cord were congested, but showed no signs of inflammation. The intestines in the neighborhood of the ileo-cæcal valve exhibited the peculiar condition occurring in typho-malarial fever, as pointed out by Dr. Woodward, of Washington. Ulcers were found, not sharp cut, as in typhoid, but with depressed edges, stained with pigment. There appeared to have been no sloughing out of the mucous membrane. The mesenteric glands were enlarged. The liver was as is found in ordinary typhoid; so also was the heart. The interesting point about the case was, that there were so many symptoms resembling cerebro-spinal meningitis, and so few characteristic of typho-malarial.

Dr. Heitzman wished to know whether it was necessary to consider it as a special form of fever, or as typhoid with a malarial complication.

Dr. Loomis said the disease was a malarial fever of a peculiar type, but soon all symptoms deepened into those of true typhoid fever. The disease had at times an eruption. The manner of death resembles that of typhoid. The lesions differed markedly from typhoid, and were as previously noted.

Amputation of Leg for Chronic Disease of Knee-Joint.—Dr. Sayre presented the leg of a girl twelve years of age, which he had amputated. The history was that the child, when seven years of age, fell from a sofa and injured her knee. Synovitis resulted, and terminated in flexion of the knee at a right angle. The treatment which had been pursued apparently did not take into account the important principle of extension, though, from the history of the case, it would seem that some of the medical attendants had cut the tendons around the knee with this end in view. When she came under observation at Bellevue Hospital, the deformed leg was found to be four inches shorter than its fellow on the opposite side. The head of the tibia rested in the inter-condylic space of the tibia. At the operation, no difficulty was found in separating the tibia, and a very small amount of blood was lost.

Dr. Finnel asked why exsection would not have been a better operation for the patient than amputation. He called to mind a case operated on by Dr. Van Buren, where a good result followed such an operation, and allowed the use of an artificial foot. Dr. Sayre said that the atrophied limb was four inches shorter than its fellow, and when her growth was completed the difference would be greater.

Nævus of Foot.—Dr. Sayre also presented a nævus which had been removed from the left foot of a patient forty-five years of age. It occurred as a circular tumor, about two inches in diameter, and situated on the inner surface. It began as a discoloration beneath the skin, and steadily increased in size. Four years ago he scratched the tumor, and found that it bled persistently, and from that time there was noticed a marked increase in its size. Two years ago it sloughed, but subsequently had much the appearance that it had formerly. At the time of operation, the tumor looked much like fungus hæmatodes, but on closer inspection its vascular character could be distinguished. It was removed by the house-surgeon, Dr. Bell, and did not return.

Dr. Sayre also presented the plaster-cast of an arm of a patient, which presented a fusiform vascular tumor, extending along the arm and forearm. The cause of the dilatation of the veins was a cicatrix in the arm, which involved a large venous trunk, and with the resulting obliteration of the vein there followed stasis and dilatation.

Hip-Joint Disease.—Dr. Sayre also presented two specimens of hip-joint disease. The first was from a girl, aged eleven, who had received a direct injury eight years ago. Six years ago an abscess formed on the thigh, which discharged pieces of bone.

The operation of exsection was performed on October 16th. The patient was then in an exhausted condition, but soon rallied from the operation, and did well. The head and neck of the femur were found to be destroyed.

The second case was that of a boy, aged fourteen. He was supposed to have rheumatism. At the operation the head of the femur was found loose. The patient did well, and in five days was able to go out in a carriage.

Dr. Heitzman said he had examined Dr. Sands's tumor of the breast, and found it to be a cysto-mixo-sarcoma. He was of opinion that it would not return after thorough extirpation.

Osteo-Sarcoma of Femur.—Dr. Stimson presented a specimen of tumor of the femur, with the following history. The patient was injured eighteen months ago, and six months subsequently a swelling occurred on the outer condyle of the femur. The limb was amputated, and on examination there was found to be an osteo-sarcoma, which arose from the outer surface of the condyle, and had its origin apparently in the subjacent spongy tissue. The tumor spread into the cavity of the joint. The patella was eroded, but the semilunar cartilages were preserved. There was slight enlargement of neighboring lymphatic glands.

Polypus of Nose.—Dr. Beverly Robinson presented a specimen of mucous polypus of the nose. He had removed the growth from the patient three times, but in each case it returned. There was considerable bulging out of the ala of the nose. The hearing was not affected unless there was an intercurrent coryza.

On examining the posterior nares by the rhinoscope, the polypus was found not to pass beyond the septum. It was removed by the snare, but with difficulty, from the broad base to which it was attached. The after-treatment consisted in the local use of tannin and other astringents, but they did not prove satisfactory. Dr. Mason thought that tannin was most satisfactory as an application after removal. Dr. Briddon used the tannin in the form of snuff.

Extravasation of Blood resulting in Gangrene from Pressure.—Dr. Finnel presented the fractured bones of the forearm of a patient who died from the remote effects of a compound fracture. A boy, sixteen years of age, fell and received a compound fracture of the ulna and radius. There was an opening about an inch in length, but no special complication of the case other than that usually seen. On the following day it was discovered that there was extensive extravasation of blood, which extended above the elbow. The tension was so great that incisions were made in the skin to relieve the pressure. Drs. Frank H. Hamilton and Stephen J. Clark saw the case in consultation on the third day, and, as there was commencing gangrene, it was thought best to amputate it. The operation was performed, but shortly afterward the patient died. Dr. Finnel asked the opinion of the Society as to whether it would not have been better to have operated at an earlier date. Dr. Post said that it was the duty of the surgeon to try and save the limb. Such a result as did take place could not possibly be foreseen. He thought that the hæmorrhage might have taken place from the interosseous artery, which in some cases was of large size.

Polypus of the Rectum.—Dr. J. Lewis Smith presented an interesting specimen of polypus of the rectum, which he had removed from a boy six years of age. For the past two years there was prolapse of the anus, which occurred at each motion of the bowels. When he came under the observation of Dr. Smith an examination was made, and it was found that there was no prolapse, strictly speaking, but a polypus which had a pedicle, and barely protruded at the anus. The point of interest was that the child had been so long under observation, and no diagnosis made of the proper state of the case.

Suspected Entozoa.—Dr. Flint presented a worm, which had been given to him with the statement that it came from the patient's mouth. The specimen was referred to Dr. Dalton for examination.

Tumor of Mammary Gland.—Dr. Post presented a tumor of the mammary gland, which he had removed four weeks ago. The patient did well after the operation. The interest of the case was that it presented many of the external characteristics of soft cancer, yet was simply an adenoma. It would seem that adenomatous nodules formed in the gland, and pushed their way through the skin. Dr. Satterthwaite examined the mass, and found it to have in the centre epithelial elements indicating cancer. He was of the opinion that the tumor was originally benign, but had taken on a malignant nature.

Quimby's Operation.—Dr. Post presented a case in which he had performed the amputation at the ankle-joint known as Quimby's operation. The patient had his foot crushed by a car, but neither the tibia nor fibula was injured. The operation essentially consists in not making a section of the articular surfaces of the tibia and fibula, so that the growth of the bone shall not be arrested. Dr. Quimby found, by taking casts of the stump after it had healed, and comparing it with the leg after the patient had attained his full growth, that no arrest of development occurred.

Extirpation of the Rectum.—Dr. C. K. Briddon presented a case of disease of the rectum in which extirpation had been practised. The patient was a mulatto woman, aged forty-five, who came under treatment at the Colored Home.

Three years ago she complained of pain in the small of her back. During September, 1875, she detected a small but very painful growth near the anus, which increased till it attained the size of a half-dollar piece. There was considerable tenesmus, with frequent desire to urinate, and a sensation of burning pain in the rectum, which was increased by defecation. Six weeks before admission the outside growth was removed. The patient entered hospital August 11, 1876, and at that time an irregular mass could be felt through the posterior wall of the vagina. Upon rectal examination a slightly-prominent nodular growth was found, which encircled the gut, and extended from the external sphincter upward for an inch and a half. The rectum was freely movable, and its calibre was but little reduced in size. On examining the patient a month after admission, the mass was found to have extended upward an inch, making in all two and one-half inches.

The operation of extirpation of the rectum was performed on November 20th. There was but little change beyond an enlarged lymphatic gland above the mass. The operation consisted in splitting up the anal perinæum by an incision which reached from immediately behind the fourchette to the point of the coccyx. The anterior and posterior divisions of this incision were united by carrying the knife along the mucous membrane about one-fourth of an inch above the opening of the anus. Loops were then passed through the skin-flaps on either side, and through the end of the gut. The insertions of the levator ani were severed by the knife, and the rest of the operation performed with the blunt-pointed scissors and the handle of a scalpel. The separation of the mass from the vagina was readily accomplished, but much difficulty was experienced high up in the concavity of the sacrum. Eventually the intestine was brought down and attached to the skin below by twelve sutures. An examination of the mass showed it to be cylindrical epithelial cancer. It was somewhat nodular, and grayish-pink in appearance. The surface of the mucous membrane was ulcerated at different points. The mass on section was seen to have principally involved the mucous membrane. A microscopical examination gave evidences of a large quantity of epithelial cells, with a marked tendency to the formation of tubuli. The surrounding connective tissue was infiltrated with small round cells.

Stated Meeting, December 13, 1876.

Dr. C. K. Briddon, President.

Report of Microscopical Committee.—Dr. Heitzman reported that the polypus of the rectum presented at last meeting proved to be an adenoma.

Cancer of Stomach and Œsophagus; proposed Operation.—Dr. Delafield presented a case of cancer of stomach and œsophagus, in which it was proposed to relieve the patient by gastrotomy. The patient came under observation during November, 1876, and dated his sickness as commencing two years previously. During the last year, difficulty of swallowing was an important symptom, and increased in severity till it seemed that the patient would die of starvation. When he tried to swallow fluids, they seemed to remain in the lower part of the œsophagus, and in great part to be regurgitated. A bougie was introduced, and found to be arrested immediately before entering the stomach. During the course of the disease there was no abdominal pain, nor nausea nor vomiting, but there was great emaciation. From the history of the case, it seemed that there were no symptoms to indicate any disease of the stomach, and it was decided to perform the operation of gastrotomy, and allow the patient a longer lease of life. On December 7th, this operation was attempted, but shortly after the administration of the ether the symptoms became so alarming that it was necessary to have recourse to artificial respiration, and the use of subcutaneous injections of brandy. The operation was not proceeded with, and the patient died in twenty-four hours. At the autopsy, Dr. Delafield practised the operation he proposed to do on the living subject. An incision was made parallel to the ninth rib, and carried into the abdominal cavity. The stomach was secured, but found to be adherent. The abdomen was then laid open, and the stomach was found to contain a cancerous growth which involved one-third of it, and extended upward into the œsophagus for the distance of an inch. The disease of the stomach was not recognized during life. The heart was in a condition of brown atrophy, and the inference was that the condition of the heart caused the unfavorable symptoms manifested when the patient was being placed under the influence of the anæsthetic.

Dr. Delafield presented three other cases of cancer of the stomach. The first occurred in a man aged forty-seven. The first symptoms were manifested eleven months before death. A tumor was felt through the abdominal wall. This tumor at the autopsy was found to be situated on the anterior wall, and projected into the stomach. The symptoms were vomiting, and pain in the region of the epigastrium. They increased till the patient died. At times the patient vomited a small quantity of blood.

The second case was fifty years of age. The disease developed fifteen months before death. There was pain, but no vomiting. On examining the abdomen an enlargement was detected in the region of the left lobe of the liver. At the autopsy it was found that there was cancer of the stomach, and that the mass projected into the left lobe of the liver, and pushed it forward.

The third case shown by Dr. Delafield was one in which there was cancer of the pylorus, resulting in stricture. The disease was first manifested fourteen months before death. The only symptoms were vomiting and constipation, the vomiting coming on shortly after the administration of food.

There was no appreciable tumor in the region of the stomach and no pain. A diagnosis was not made. At the autopsy the stomach was found dilated and thickened, particularly in the region of the pylorus. This thickening, which resulted in stricture, was caused by cancer involving the submucous coat of the stomach in the neighborhood of the pylorus.

Entozoa.—Dr. Flint reported that the worm which he had presented at the last meeting of the Society had been examined by Prof. J. C. Dalton. It proved to be a specimen of *nereis*, or ground-worm.

Pentastoma Constrictum.—Dr. Flint also presented a specimen of pentastoma constrictum, which had been sent to him by Dr. N. M. Campbell, of Albany, Missouri. The history of the case furnished was to the effect that a man aged thirty-six, who had been in the war, had an attack of pneumonia, or pleurisy, during April, 1875. Following this, there was a vomica in the left lung. On one occasion, the patient was suddenly attacked with a sudden discharge of offensive fluid, which escaped from the mouth and nose. Similar attacks occurred subsequently, though less in degree. An examination of the liver showed it to be enlarged. There was marked emaciation, with tympanites, about a month before writing to Dr. Flint. Dr. Campbell had secured several entozoa resembling maggots, which the patient either spat or vomited up, and sent them on for an opinion. He referred to a description, which was to be found in Aitken's practice of medicine, under the head of pentastoma constrictum, and which accurately described the history of the case as well as the appearance of the parasite. Dr. Flint said that Dr. Campbell had promised, in the event of the patient's death, to forward the specimen, but a year had elapsed and he had heard nothing more of the case.

Destruction and Removal of Bones of the Foot.—Dr. Erskine Mason presented a boy who had received a severe injury of the foot, which resulted in recovery without amputation.

The patient was seven years of age, and had his foot severely contused by the shutting of a door. Following the injury, erysipelas occurred, and resulted in numerous abscesses, which, on examination, proved to lead to dead bone. It was first thought that the best operation for the patient would be Syme's, but on more mature consideration it was determined to remove the dead bone. This was done, and the scaphoid cuboid and a portion of the middle cuneiform were taken away, as well as the head of the metatarsal bone of the great toe; only slight hæmorrhage took place during the operation. Subsequently, the foot was placed in plaster-of-Paris dressing, and carefully attended by the house-surgeon, Dr. Hope, of Bellevue Hospital, to whom Dr. Mason thought much credit was due for the good result obtained. The boy presented a serviceable foot, and showed but little evidence of the large amount of disease. Three months elapsed between the time of injury and the presentation before the Society.

Dr. Mason referred to a similar case which he had under treatment, in which disease of the carpal bones resulted from a splinter passing into the wrist.

Congenital Luxation.—Dr. Mason also presented a specimen taken from a mulatto child which died when one month old. The specimen showed the tibia to be in a state of congenital luxation, but readily reduced.

Malignant Disease of the Colon.—Dr. Stimson presented a specimen of malignant disease of the colon. The patient died in a state of collapse.

Vesico-Rectal Fistula; Lumbo-Colotomy.—Dr. R. F. Weir presented a specimen of vesico-rectal fistula, in which lumbo-colotomy was performed to relieve the urgent symptoms of the patient.

The first symptom noticed was difficulty in passing water. On examination, the urine was found to contain fæces, and from this the true condition of the patient was suspected; but on examining the rectum no sign of fistula could be made out. The bladder was then injected with milk, but the passage of the milk into the intestine was not satisfactory. A similar procedure was again tried with the patient in a different position, and the milk then passed readily into the rectum. It was then decided to practise lumbo-colotomy, according to the method suggested by Bryant, and on August 30th this was done. After the operation, all of the painful symptoms connected with the bladder were relieved, and remained so till November 30th, when he died. Shortly before his death, there were indications of his former troubles returning, due, in all probability, to the passage of a portion of the fæces past the artificial anus. The autopsy disclosed an opening between the upper part of the rectum and bladder large enough to admit the finger. The small intestines were matted together.

Dr. Weir referred to a case of the late Dr. Krackowizer, in which an opening took place between the bladder and the vermiform appendix.

Dr. Erskine Mason said that he believed there were seven or eight cases on record in which the operation of lumbo-colotomy was performed for vesico-rectal fistula, and in all of them immediate relief followed the operation. He had reported before the Society about two years ago a similar case.

Morbus Coxæ.—Dr. Sayre presented the head and neck of a femur which he had removed from a child seven years of age, who had received a direct injury three years ago. The disease passed into the third stage, but was much improved by appropriate mechanical treatment. Eventually it was considered best to perform the operation of excision of the hip-joint. The patient made a rapid recovery. Dr. Sayre presented a second specimen of the head and neck of a femur, which he had removed from a patient suffering from hip-joint disease.

Dermoid Cyst.—Dr. R. F. Weir presented a dermoid cyst which he removed from the abdomen of a young girl at the *post-mortem* examination. No diagnosis was made during life.

Submucous Fibroid of Uterus.—Dr. Post presented a submucous fibroid tumor, which he had removed from a woman at the Presbyterian Hospital. The tumor was of large size, and occupied the vagina, presenting at the vulva. Different attempts were made to remove it by traction, but they failed completely. Following these attempts, the temperature rose to 104°. Two weeks afterward, the galvano-cautery was used in rather a novel manner. The heated platinum was carried into the tumor, and it was thus in part destroyed from the inside. After this operation, the tumor contracted considerably, and the removal was completed by taking it away piecemeal. The weight of the tumor was two pounds.

Perforation of the Appendix Vermiformis.—Dr. Briddon presented the appendix vermiformis and portion of colon and ileum of a patient who had died from general peritonitis.

He was forty years of age, and gave a history of having an attack of peritonitis two years previously on the right side. On December 3d he was seized with severe pain, most intense at the umbilicus, and accompanied with vomiting. Tympanites occurred on the following day. There was then marked tenderness in the right inguinal region, but no tumor.

Sixty-three hours after the first symptoms appeared, the patient sank and died of general peritonitis. At the autopsy, considerable gas escaped from the abdominal cavity. On examining the appendix it was found that there was a perforation, and in the perforation a plum-stone was lodged. The perforation was about one-third of an inch in diameter. There was found, also, some distance from the cæcum, a deposit of recent fibrine, which looked, from the color of it, as if gangrene were present. The intestine beneath showed no evidence, however, of perforation or gangrene.

Dr. Briddon said that he thought that, in perforation, the prognosis depended in great part upon the amount of extravasated fæces. If they were small in quantity, an abscess would likely result; but, if, on the other hand, they were abundant, as in the case presented, general peritonitis would most likely result.

NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, December 11, 1876.

Dr. John C. Peters, President.

On the Proper Treatment of Laceration of the Cervix Uteri. By Dr. Thomas Addis Emmet.—Dr. Emmet spoke in effect as follows:

About two years ago I read a paper before this Society on the subject of "Laceration of the Cervix Uteri as a Frequent and Unrecognized Cause of Disease," and since that time have heard expressions of disappointment from some of those who have performed the operation which I then suggested. The cause of failure rests, I think, in the neglect to properly prepare the patient by appropriate treatment, for, if this precaution be not taken, not only may no benefit result, but the life of the patient may be jeopardized.

The conditions detrimental to an operation, and which should be removed before bringing the flaps together, are cystic disease of follicles, which roll out the flaps and sometimes nearly strangulate them; pelvic peritonitis or cellulitis; displacement of the uterus; presence of cicatricial tissue at the apex of the cleft; also constriction of the cervix by cicatrix at the base resulting from double laceration; and congestion of the uterus from any cause.

Cystic disease of the follicles of the cervix results from an inflammation of them, and consequent dilatation from closure of their orifices. When the patient is examined in this condition, the mucous membrane will be found rolled out usually to the internal os, and the flaps will look as if strangulated. If the cervix is examined by the finger, numerous little cysts, resembling shot, will be felt. The treatment is to puncture them, and apply Churchill's tincture of iodine to the cervix. This procedure must be had recourse to time and again, as long as their presence can be detected.

Pelvic peritonitis or cellulitis is a very common result of the injury, and it will recur in nearly every instance after operation, if it be performed before every trace of tenderness has disappeared from the neighborhood of the uterus. It frequently happens that one or both folds of the broad ligament become thickened and shortened by inflammation. Then the whole weight of the uterus is supported by the ligament when the patient sits or stands up. Irritation, which follows, often keeps up an old cellulitis, and this cellulitis can most readily be cured by adopting a pessary to relieve the tension; care must be taken, however, not to apply a pessary which will lift the uterus too far upward, for in that case tension would still occur, but in the opposite direction. The best guide is the patient's sense of relief, and her unconsciousness of the presence of the instrument.

The other treatment of peritonitis or cellulitis is the use of counter-irritation to the lower part of the abdomen, and vaginal injections, night and morning, of water of a temperature ranging from 100° to 110°. The most frequent form of displacement is backward and to the side. Treatment must be continued till the uterus has assumed the normal or anteverted position.

Cicatricial tissue is usually found at the apex, or deepest part of the cleft, and, moreover, in cases of double laceration, it may be so extensive as to cause constriction of the cervix, when aided by distended mucous follicles.

Congestion of the uterus, if present, acts unfavorably to the operation. It is a usual result of sagging down of the organ from the loss of the perinæum or other supports. Hot-water injections, with artificial support, aided by the use of quinine, if the patient suffers from malaria, should be persevered in till the patient is relieved.

After the proper preparatory treatment has been pursued, failure, partial or complete, may result from lack of sufficient care to adjust the flaps. When the cysts, if formerly present, are thoroughly evacuated, a convex surface may result from contraction—this must be cut away to get proper adaptation.

Again, the cicatricial tissue must be thoroughly removed, for its presence in the cervix is often an unsuspected cause of nervous or neuralgic symptoms in other parts of the body. Failure may also result from too tight twisting of the sutures, causing them to cut out.

The operation of freshening the edges is simple in principle and not difficult in practice. It is much facilitated by drawing the uterus gently down toward the vulva, and steadying it with a strong tenaculum, held in the hand of an assistant. The lowest portion of the lacerated surface should be removed first, inasmuch as by this means the oozing of blood does not obstruct the view of the undenuded surface. The portion to be removed is hooked up with a tenaculum, and kept on the stretch, while it is being separated, for, by doing so, a continuous strip, running from flap to flap, can be taken away, and it is the best plan for insuring denudation of the whole surface. If the surface be lacerated by a dull instrument, instead of a sharp knife or scissors, there may be additional risk in obtaining union by first intention. The more dense and indurated the tissue, the less vascular will be the parts, and in such a case the lancet-pointed needle of Dr. Sims serves best for the introduction of the sutures. If, however, the cervix is soft and vascular, the round needle should be used. The chief object to be kept in mind is the accurate adjustment along the outer or vaginal surface of the cervix, for, if this is done, no trouble will occur in approximating the inner surface. After a week, the sutures can be removed, but care must be taken in their withdrawal, that the adhered surfaces be not torn apart.

The principles of the operation are simple, and its execution not difficult, but the best results will follow cases in which the greatest care has been taken as to the details of treatment, and particularly to the preparation of the patient, which may extend for a period of two or three months, or till all signs of coexisting disease are removed.

Dr. Fordyce Barker said: "When I heard Dr. Emmet read his first paper, some two years ago, I listened to it with interest and amazement. If I had at that time expressed my opinions on the subject, I would now be put to the painful duty of recalling them, for I did not then believe that the views in regard to pathology and treatment, which were then advanced, would be borne out by the body of the profession. I am now thoroughly converted, and consider that the observations which were then made are of great importance, and founded upon true pathology. Some time after Dr. Emmet read his paper, I had the privilege of seeing a case of the class referred to, and found it was as Dr. Emmet had described, the uterus measuring five inches. The operation was performed, and, on examining it some time afterward, I was at first of the opinion that Dr. Emmet had by mistake presented another patient, so complete was the change in the uterus and cervix. An important feature of the case was that no cicatrix could be discovered as a result of the operation, and in this respect an operation presented a marked improvement on the process of Nature. Some years ago, when I conducted clinics at the college to which I was attached, and later at Bellevue Hospital, I found that a considerable number presented erosions of the cervix, which, though improved by treatment, would continually relapse. I then used the actual cautery, and was much pleased with its effects. I feel now convinced that the erosions which developed after, and as a result of parturition, were what Dr. Emmet has taught us as lacerations of the cervix. Cases, which were treated at the clinic, occasionally returned for delivery in the obstetric wards, and I then found, contrary to what might be expected, that the cicatrix presented no obstacle to the dilatation of the os uteri. In the upper class of patients I have seen few of the cases referred to in later years, and it results, I think, from the better attention which they receive from their medical attendant. I was called to see a case some time ago, in which a surgeon had performed Dr.

Emmet's operation, and found the patient suffering from general peritonitis, which began as pelvic peritonitis. The patient had not had the benefit of preparatory treatment, which was so strongly urged in the paper which we have just heard."

Dr. Peaslee said: "The lacerations referred to by Dr. Emmet are usually on the left side, but the diagnosis of them is not such an easy matter. When at Demilt Dispensary, a large number of cases of the class referred to by Dr. Emmet presented themselves, but were not recognized, for none of us knew anything about them till Dr. Emmet told us. It was he who, in a happy moment, brought the anterior and posterior surfaces together with two tenacula, and instantly demonstrated that what we all thought was an ulceration of the cervix was nothing more or less than a laceration. When lacerations take place as far up as the vagina, involution is stopped from the continuous irritation which keeps up a congestion. If the patient remain in bed, the same result will not happen to such an extent. This subinvolution is a common cause of sterility, and it is proved by the fact that the patient becomes pregnant after the operation.

"One case of laceration which I observed was seven inches in circumference, or about two and one-third in diameter. Three months after the operation it had diminished to the normal size. In regard to the removal of the sutures, I have had no trouble with the flaps separating, as I keep them in for more than a week, and do not take them all away at once The uterus heals more often by first intention than the majority of other tissues, for the reason that it is composed of non-striated muscular fibre."

Dr. Pallen said that the thanks of the profession were due to Dr. Emmet for the flood of light which he had shed on the subject. He had found at the clinic for diseases of women, at the university, that forty per cent. of all cases treated had lacerations of the cervix.

Dr. Mundé found that, at the department of diseases of women, of Mount Sinai Hospital, four hundred and ninety-six cases had presented themselves, and of these twenty-eight had lacerations of the cervix, making five and six-tenths per cent.

Dr. Hanks referred to a case which he had operated on, and suggested for inexperienced hands the use of the double tenaculum. The instrument had a joint similar to that of a pair of scissors, and could be used with one hand.

Dr. Gillett had operated, and found the advantage of preparing the cases in the manner referred to by Dr. Emmet.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, November 27, 1876.

Dr. H. B. Sands, President.

The officers for the ensuing year are: President, Dr. J. C. Peters; Vice-President, Dr. Isaac E. Taylor; Recording Secretary, Dr. A. E. M. Purdy; Corresponding Secretary, Dr. F. A. Castle; Treasurer, Dr. H. P. Farnham; Censors, Dr. C. W. Packard, and Dr. E. H. M. Sell; Delegates to the New York State Society, Dr. R. F. Wen, and Dr. A. M. Hamilton.

Dr. Sands made a few remarks as retiring president.

Dr. John C. Peters, the president elect, then took the chair, and alluded to the fact that the Society was seventy years old, and in all of that time had never published its transactions. There was in the treasury of the Society about as much money as the Society could legally hold, and it would soon become a necessity to dispose of it in some way. He hoped that, before the meeting adjourned, some member would make a motion bearing on the subject.

Amputation at the Hip.—Dr. Erskine Mason presented two patients upon whom he had performed amputation at the hip-joint. They were reported in the December number of the Journal.

Dr. A. B. Crosby read a sketch of the lives and practice of physicians who lived a century ago in the New England States. The paper included the lives of Josiah Bartlett and Matthew Thornton, both of whom signed the Declaration of Independence; Joshua Brackett, Lyman Spaulding, and Nathan Smith. Joshua Brackett was best known as a philanthropist. Lyman Spaulding originated the American Pharmacopœia, and Nathan Smith has left a record as one of the most advanced of the early American surgeons. His name is connected with the reduction of dislocation of the hip by means of manipulation. The story Dr. Crosby related, as explaining the method by which he learned to practise, was as follows: "A sailor, while on a voyage, fell from one of the masts and dislocated his hip. His associates attempted reduction by traction, but completely failed, and placed the patient in his berth. Shortly afterward, during a severe storm, the patient was thrown out of his berth, and by this second accident the hip was found to be reduced." The skipper gave the history of the case to Dr. Smith, who evolved from it the reduction by means of manipulation. One of the most important characteristics was his great regard for the poor, whom he considered as his special wards. His example, even today, in this respect, might be followed with benefit by many who, in their search for notoriety and position, forget that the poor, and more particularly the sick poor, are dependent upon them alone for medical care.

Bibliographical and Literary Notes.

Art. I.—*A Treatise on Hernia, with a New Process for its Radical Cure, and Original Contributions to Operative Surgery, and New Surgical Instruments.* By Greensville Dowell, M. D., Professor of Surgery in Texas Medical College, etc. Philadelphia: D. G. Brinton, 1876.

The object of the author of this work has evidently been to make a book. In one sense he has succeeded. The major portion of his work consists of a consideration of the general subject of hernia. In this we find nothing that is new, and much that is far better treated of in the various text-books on surgery. That portion of the work in which we have an account of his new operation for the radical cure of hernia would probably be far more extensively read had it appeared in some medical journal. His operation consists in surrounding the canal through which the hernia passes by wire ligatures, several being used if necessary; the wires are then twisted so as to approximate the sides of the canal, and the ligatures are allowed to remain eight days. The wires are passed by means of a curved needle. By this method we find he also invades the cavity of the peritonæum, a fact which might in some cases give rise to a serious peritonitis. The number of cases thus operated on he gives as nine hundred and sixty-four, with a result of eighty cures. Certainly a very flattering result, but we fear that time will rob him of many of the cures, as it has done in other operations designed for a similar purpose.

Art. II.—*Cyclopædia of the Practice of Medicine.* Edited by Dr. H. von Ziemssen. Vol. VI. *Diseases of the Circulatory System, together with the Chapters on Whooping-Cough, Diseases of the Lips and Cavity of the Mouth, and Diseases of the Soft Palate.* By Prof. Rosenstein, of Leyden; Prof. Schroetter, of Vienna; Prof. Lebert, of Vevay; Prof. Quincke, of Berne; Dr. Bauer, of Munich; Dr. Steffen, of Stetten; Prof. Vogel, of Dorpat; and Prof. Wagner, of Leipsic. Translated by George W. Balfour, M. D., of Edinburgh; Edward G. Geoghegan, M. D., of London; Thomas Dwight, M. D., of Boston; J. Haven Emerson, M. D., and George G. Wheelock, M. D., of New York; and J. Solis Cohen, M. D., of Philadelphia. A. H. Buck, M. D., New York, Editor of American edition. 8vo, pp. xxiv.–1014. New York: William Wood & Co., 1876.

The importance to be attached to the class of diseases included in this volume of the "Cyclopædia" is unquestionably very great; yet, inasmuch as the consideration of diseases of the nervous system was commenced in the volume previously issued, it is rather to be regretted that the succeeding volume should not comprise a continuation of the same subject. The plan adopted in grouping certain sections upon subjects so diverse, as is shown in this volume, seems somewhat incongruous; nevertheless, so long as the individual chapters are in the main well considered, we have little cause for complaint. We notice among the contributors to the volume several familiar names—gentlemen known to the profession as able writers, and thoroughly skilled in their respective branches.

Rosenstein contributes the "Introduction to Diseases of the Heart" and "Diseases of the Endocardium," including valvular affections. In the former due attention is given to the significance of the physical symptoms, and especial care is devoted to the consideration of the pulse, with sphygmographic tracings in the different forms of heart-disease. The author explains the origin of endocardial murmurs "by oscillations of the blood itself," and not by friction over roughened valves.

"The old theory that murmurs are produced on the rough surfaces of the valves and vessels, by friction with the blood, is physically untenable since the investigations of F. Neumann, Poiseuille, and others, on the motion of fluids in closed vessels, have proved that the extreme peripheral layer of the fluid moistens the walls, and must consequently be at rest. This view, too, is in perfect accordance with a series of well-known pathological facts; as, for instance, that no murmur is to be heard in extensive atheroma of the vascular walls (provided the atheroma is not complicated with alterations in the lumen of the vessels), and further, that the maximum intensity of a murmur is not to be heard where we should have to suppose the greatest friction" (p. 53).

Rosenstein treats endocarditis under the three following heads:

1. "Acute Ulcerative or Diphtheritic Endocarditis."
2. "Acute and Subacute Verrucose Endocarditis."
3. "Chronic Sclerotic Endocarditis."

Different observers have from time to time described an ulcerated condition of the valves of the heart, and Lancereaux[1] mentions a special form of ulceration attended with symptoms of pyæmia. Rosenstein is inclined to the opinion, it would seem on rather insufficient grounds, that the disease is diphtheritic in nature. This condition is noticed in some of the recent treatises,[1] being mentioned as a condition occasionally occurring in the course of acute endocarditis, and found in low states of the system. Inasmuch as the diagnosis rests upon so much uncertainty, and its nature is so obscure, it would seem, in the present state of science, just as well to eliminate it from separate consideration, and describe it as a complication or a varying condition in endocarditis. According to the author, the great majority of cases occur in the course of an attack of acute rheumatism.

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[1] *Archives Générales de Médecine*, Juin, 1873.

The same remark, as regards classification, will equally apply to the third variety of the author—the so-called chronic sclerotic endocarditis. In making these remarks upon the author's classification, we are not disposed to speak in terms of criticism upon the manner in which he treats the several sections allotted to him, for his articles are, indeed, very excellent. All the authors seem reticent so far as quoting American authorities is concerned, and neither Rosenstein nor Schroetter makes any allusion to the effect of strain and overwork, and the possible influence of functional derangements in laying the foundation for organic diseases, as suggested by Da Costa, although Schroetter suggests great exertion as one of the possible causes of spontaneous rupture of the heart.

Schroetter contributes the section on "Changes in the Position of the Heart and Diseases of the Heart-Substance;" Lebert that on "Congenital Diseases of the Heart;" Quincke contributes the elaborate sections on "Diseases of the Vascular System (Arteries, Veins, and Lymphatics);" and Bauer that on "Diseases of the Pericardium."

It may be remembered by the readers of this JOURNAL that in the number for November, 1875, we noticed a small volume by Lewis, of India, in which it was claimed that chyluria and the elephantoid diseases were occasioned by the escape of chyle, the escape being due to the migration of minute blood-worms. Quincke makes mention of the investigations of Lewis, and seems to give credence to his conclusions, at least in a certain proportion of cases.

In the article "Whooping-Cough," by Steffen, Binz's plan of treating it with large doses of quinine is spoken of with much favor. The author employs it in doses of nine grains, repeated twice daily, in children five or six years old.

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[1] Flint's "Principles and Practice of Medicine;" Hayden's "Diseases of the Heart and Aorta," etc.

"Diseases of the Lips and Cavity of the Mouth" is written by Vogel. In giving the clinical history of mumps, the author mentions vomiting among other possible symptoms. This reminds us of a case of mumps occurring within the past year in a gentleman aged thirty-six or thirty-seven, in which vomiting and nausea were very persistent for three or four days, to such an extent as to create some alarm. In consulting several authorities, Meigs and Pepper's "Diseases of Children," of those consulted, alone contains a report of a case in which vomiting persisted for four days, exciting considerable apprehension, and afterward recovered. We mention this (we think) infrequent symptom, in order that others treating it may be on their guard.

In "Diseases of the Soft Palate," Wagner writes upon "Pharyngeal Diphtheria" notwithstanding the subject was so exhaustively treated by Oertel in Volume I. The author differs in some respects from Oertel. He believes there is but little evidence of the parasitic nature of the disease, and thinks little is known respecting its true nature. Wagner does not make a point of recommending steaming the throat by way of treatment, as insisted on by Oertel. To the great value of the local employment of steam, not only in diphtheria, but also in croup, laryngitis, and acute bronchitis of children, we can add our testimony.

This volume, in consequence of its comprehensive character, has reached considerable size, and its great usefulness cannot be questioned. The translation seems to be very well done, and the style of the book compares favorably with those of the series already issued.

Art. III.—*On Masturbation and "Hysteria" in Young Children.* By A. Jacobi, M. D., etc. 8vo, pp. 32. New York: Wm. Wood & Co., 1876.

The pamphlet before us is a very modest yet learned production, in which no attempt is made to magnify unduly the importance of any class of cases. Instruction alone seems to be the design of the author. He introduces to our notice some peculiar cases which the practitioner occasionally sees, but the exact nature of which it is difficult to explain. He shows that very young children, from various irritating causes, sometimes acquire the habit of kneading or rubbing the genital organs, either by their hands or crossed thighs, and thus develop some of the neuroses. In individual neurotic cases Dr. Jacobi believes in making a pathologico-anatomical diagnosis, thus being able to treat the disease upon scientific principles. We judge that he favors the abandonment of such terms as "hysteria," "spinal irritation," and other indefinite expressions. In order to secure the many practical points in the *brochure*, we recommend its perusal.

ART. IV.—*Principles of Human Physiology.* By WILLIAM B. CARPENTER, M. D., F. R. S., F. G. S., F. L. S., etc. Edited by HENRY POWER, M. B., London, F. R. C. S., etc. A new American, from the eighth revised and enlarged English edition, with Notes and Additions. By FRANCIS G. SMITH, M. D., Professor of Institutes of Medicine in the University of Pennsylvania, etc. Philadelphia: Henry C. Lea, 1876.

A TEXT-BOOK that has reached its eighth edition has achieved a success that is not easily affected by the critic's praise or censure. The merits of Carpenter's "Physiology" are so widely known and appreciated that we need only allude briefly to the fact that in the latest edition will be found a comprehensive embodiment of the results of recent physiological investigation. Care has been taken to preserve the practical character of the original work. Extensive changes have been made in accordance with the latest discoveries in regard to the circulatory system, the liver, the kidneys, the nervous system, including the researches of Ferrier, Hitzig, and Fritsch, and the views of Hermann and Radcliff on electrotonus. The chapters on embryology have undergone a like careful revision; and, in fact, the entire work has been brought up to date, and bears evidence of the amount of labor that has been bestowed upon it by its distinguished editor, Mr. Henry Power.

The American editor has made the latest additions, in order fully to cover the time that has elapsed since the appearance of the last English edition.

Art. V.—*Diseases of the Bladder, Prostate Gland, and Urethra, including a Practical View of Urinary Diseases, Deposits, and Calculi.* Illustrated by Wood Engravings. Being the fourth edition of the "Irritable Bladder," revised and much enlarged. By Frederick James Gant, F. R. C. S., Surgeon to the Royal Free Hospital. Philadelphia: Lindsay & Blakiston, 1876.

This is an enlarged edition of the author's well-known and excellent treatise on "Irritable Bladder," which has been for some time out of print. It does not assume to be a complete work on the diseases of which it treats, but it contains the results of the author's large personal experience, and has a practical tendency throughout that renders it attractive and valuable. It does not, however, appear to possess a proportionate value, according to increased size, to that of the original treatise on which it is based. Much that is contained in it may be found more fully in other works on the same subject. The chapter on the examination of urine is excellent, and the illustrations accompanying it, as well as those in other parts of the volume, are well executed and appropriately introduced.

Art. VI.—*The Theory and Practice of Medicine.* By Frederick T. Roberts, M. D., M. R. C. P., etc., Fellow of University College, Assistant Physician and Assistant Teacher of Clinical Medicine at University Hospital College, Lecturer in the Liverpool School of Medicine, etc., etc. Second American, from the last London edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1876.

In our review of the first edition of this work, in April, 1874, we pointed out some of the leading features of its teachings, particularly the author's peculiar views on tubercular and scrofulous diseases. Some of what seemed to be shortcomings in a treatise on general practice were noticed, though, on the whole, we considered the work a valuable addition to medical literature.

In the volume now before us many of the defects of the first edition have been supplied, and several parts of the book have been rewritten. The whole has been carefully revised. A new chapter has been introduced on the "Diagnosis of Acute Specific Diseases," and the chapter on "Diseases of the Skin" has been rewritten and considerably extended.

The American student may very profitably add this volume to his list, though we do not advise him to rely solely upon it. Every practitioner should read it.

Art. VII.—*The Use and Value of Arsenic in the Treatment of Diseases of the Skin.* By L. Duncan Bulkley, A. M., M. D., etc. 8vo, pp. 45. New York: D. Appleton & Co., 1876.

This essay was read before the American Medical Association last June, and our readers will remember having seen it in the number of this Journal for August, 1876. The work is very convenient for reference, and the author's conclusions are of much practical value.

Books and Pamphlets received.—Modern Therapeutics: A Compendium of Recent Formulæ, Approved Treatment, and Specific Methods, in Medicine and Surgery, with an Appendix on Hypodermic Medication, Inhalation, Aëration, and other Remedial Agents and Therapeutic Methods of Recent Introduction. By George H. Napheys, A. M., M. D., etc. Fourth edition, rewritten and enlarged. Philadelphia: D. G. Brinton, 1877.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. VII. Diseases of the Chylopoetic System, together with Chapters on Diseases of the Naso-pharyngeal Cavity and Pharynx, Laryngitis Phlegmonosa, Perichondritis Laryngea, Ulcerations and Tumors, and Neuroses of the Larynx. By Prof. Hermann Wendt, of Leipsic; Prof. W. Leube, of Jena; Dr. O. Leichtenstern, of Tübingen; Prof. Arnold Heller, of Kiel; Prof. H. von

Ziemssen, of Munich, and Dr. A. Steffen, of Stettin. Translated by Arthur V. Macan, M. D., of Dublin; Edward W. Schauffler, M. D., of Kansas City; A. Brayton Ball, M. D., and Lewis A. Stimson, M. D., of New York; and J. Solis Cohen, M. D., and Arthur Van Harlingen, M. D., of Philadelphia. Albert H. Buck, M. D., New York, Editor of the American edition. New York: William Wood & Co., 1876.

Medical Hints in the Production and Management of the Singing Voice. By Lennox Browne, F. R. C. S. Edinburgh, Senior Surgeon to the Central London Throat and Ear Hospital, Surgeon and Aural Surgeon to the Royal Society of Musicians, etc., etc. Illustrated with Diagrams by the Author. London: Messrs. Chappell & Co., 1876. Pp. 48.

Nutrition in Health and Disease. A Contribution to Hygiene and to Clinical Medicine. By James Henry Bennet, M. D., Member of the Royal College of Physicians, London, Late Obstetric Physician to the Royal Free Hospital, etc., etc. Second edition. Philadelphia: Lindsay & Blakiston, 1876.

Recherches expérimentales sur le Rôle Physiologique et Thérapeutique de la Pancréatine. Par Th. Defresne, Pharmacien de première classe, Ex-interne des hôpitaux, Lauréat de l'École de Pharmacie. Paris: A. Delahaye, 1875.

A Lecture on Specialism in Medicine, delivered before the Class inaugurating his Annual Course of Instruction, September 21, 1876. By E. D. Forée, M. D. Reprinted from the *American Practitioner*, November, 1876.

Annual Address before the Society of the Alumni of the Medical Department of the University of Pennsylvania. By Meredith Clymer, M. D., University of Pennsylvania. With the Proceedings of the Alumni Meeting of 1876.

Lectures on the Physical Diagnosis of Diseases of the Heart. By Arthur Ernest Sansom, M. D., London, Member of the Royal College of Physicians, Assistant Physician to the London Hospital, etc., etc. London: J. & A. Churchill, 1876.

Clinical Studies, illustrated by Cases observed in Hospital and Private Practice. By Sir John Rose Cormack, K. B., F. R. S. E., M. D., Edinburgh, M. D., Paris, Chevalier of the Legion of Honor, etc., etc. Two volumes, crown 8vo. Philadelphia: Lindsay & Blakiston.

Public Health. Reports and Paper. Vol. II. Presented at the Meetings of the American Public Health Association in the Years 1874–'75. With an Abstract of the Record of Proceedings, 1872–'75. 8vo, pp. 552. New York: Hurd & Houghton, 1876.

American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. II., No. 10. Spinal Irritation: its Pathology and Treatment. By William A. Hammond, M. D. New York: G. P. Putnam's Sons, 1876.

The Treatment of the Insane. By Dr. Nathan Allen, of Lowell, Massachusetts. Read at the Meeting of the American Social Science Association, Saratoga, September 6, 1876.

Argument in Favor of a Contagious Diseases Act: its Present State. By E. T. Easley, A. M., M. D., Little Rock, Arkansas. From the October number of the *Richmond and Louisville Medical Journal.*

Report on an Outbreak of Intestinal Disorder, attributable to the Contamination of Drinking-water by Means of Impure Ice. By A. H. Nichols, M. D., of Boston.

On Pigmentary Deposits in the Brain, resulting from Malarial Poisoning. By William A. Hammond, M. D. Reprinted from Transactions of the American Neurological Society, 1875.

A Case of Ex-ophthalmic Goitre. By J. P. Thomas, M. D., Pembroke, Kentucky. From the November number of the *Richmond and Louisville Medical Journal.*

Report of the Committee on a Village of Cottage Hospitals, made to the Governors of the Society of the New York Hospital, February 24, 1876.

Cottage Hospitals. Remarks of Mr. F. A. Conkling upon the Report of a Committee on a Village of Cottage Hospitals, delivered at a Meeting of the Governors of the Society of the New York Hospital, held July 6, 1876.

On Coughs, Consumption, and Diet in Disease. By Horace Dobell, M. D., F. R. M. C. S., Consulting Physician to the Royal Hospital for Diseases of the Chest, etc. Philadelphia: D. G. Brinton, 1877.

The Medical Libraries of Boston. A Report read at the First Annual Meeting of the Boston Medical Library Association, October 3, 1876. By James R. Chadwick, M. D., Librarian of the Association.

Hauptmomente in der geschichtlichen Entwickelung der medicinischen Therapie. Von Dr. Jul. Petersen. 400 pp., 12mo. Kopenhagen: Andr. Fred. Höst & Sohn, 1877.

The Electric Bath: its Medical Uses, Effects, and Appliance. By George M. Schweig, M. D., one of the Physicians to the New York Lying-in Asylum, etc. New York: G. P. Putnam's Sons, 1877.

The History of Spontaneous Generation. By Edward S. Dunster, M. D.

Report of the Board of Health of the City and Port of Philadelphia to the Mayor, for the Year 1875. Pp. 352.

Ninety-fourth Annual Catalogue of the Medical School (Boston) of Harvard University, 1876–'77.

Transactions of the Medical Society of North Carolina, 1876.

Annual Report of the Surgeon-General, United States Army, 1876.

Reports on the Progress of Medicine.

REPORT ON LARYNGOLOGY.

No. VIII.

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BIBLIOGRAPHY.

1. Sommerbrodt.—On a Large Fibroma of the Larynx as a Cause for Epilepsy. *Berlin. klin. Wochensch.*, No. 39.
2. Jurasz.—On the Elevation and Fixation of the Epiglottis during Laryngoscopic Examinations and Operations. *Berlin. klin. Wochensch.*, No. 38.
3. Cartier and Masson.—Report on Two Cases of Caries of the Laryngeal Cartilages. *Lyon Méd.*, No. 39, September 24.
4. Klemm.—A New Procedure for Diagnosticating Lesions of the Vocal Cords. *Archiv der Heilkunde*, Heft 6, October 12.
5. Whittaker.—On Laryngeal Tumors. *The Clinic* (*Cincinnati*), September 30.
6. Scheff.—A Contribution to the Study of Fractures of the Laryngeal Cartilages. *All. Wiener med. Zeitung*, Nos. 42–45.
7. Yeo.—Clinical Remarks on a Case of Mediastinal Cancer, with Aphonia from Laryngeal Paralysis. Use of the Laryngoscope. *Lancet*, November 18.
8. Fincham.—A Case of Œdema Glottidis from Drinking Boiling Water. Tracheotomy; Recovery. *Med. Times and Gaz.*, November 18.
9. Sée.—A Tumor of the Larynx and Trachea, consecutive to the Opening of a Cyst of the Thyroid Body into the Air-Passages. *Soc. de Chir.*, *Gaz. Méd. de Paris*, No. 45.
10. Hôpmann.—On the Predisposition of the Mucous Membrane of the Vocal Cords to Polypoid Formations (Neoplasms). *Deut. Archiv für klin. Med.*, Bd. xviii., Heft 2, 3, October 13.
11. Lunn.—On Voice-Training as a Branch of Surgical Science. *Med. Press and Circular*, October 25.
12. Fürbringer.—A Study of the Laryngeal Muscles. Jena, 1875.
13. Mermagen.—On the Electrolytic Treatment of Laryngeal Tumors. *Monatsschr. für Ohrenheilk.*, No. 5.
14. Schaffer.—Tuberculous Laryngeal Perichondritis. *Deut. med. Wochensch.*, October 21, 28.
15. Isambert.—On Secondary Syphilis of the Larynx, especially Laryngeal Mucous Patches. A Critical Review of the Late Article of MM. Krishaber and Mauriac. *Ann. des Mal. de l'Oreille et du Larynx*, tome ii., No. 4.
16. Michael.—On the Physiology and Pathology of Singing. *Berlin. klin. Wochensch.*, August 14.
17. Robinson.—A Case of Catarrhal Phthisis, with Ulcerations of the Larynx, simulating Aneurism of the Transverse Portion of the Aortic Arch. *Medical Record*, No. 310, October 14.
18. Labus.—Catheterism and Mechanical Dilatation in Narrowing of the Larynx. *Annali Universale di Medicina*, August.

19. Thaon.—Treatment of Strictures of the Larynx and Trachea by Dilatation. *Le Progrès Med.*, September 16.
20. Klemm.—On Five Cases of Unilateral Paralysis of the Abductor Muscles of the Vocal Cords and Two Cases of Bilateral Paralysis. *Archiv der Heilkunde*, Heft 5, August 1.
21. Rehn.—A Case of Paralysis of the Abductor Muscles of the Vocal Cords following Typhoid Fever. *Deut. Archiv für klin. Med.*, Bd. xviii., Heft 1.
22. Hall.—Remarks on the Effects of the Trades of Sheffield on the Workmen employed in them, with Special Reference to Inhaled Irritants. *British Medical Journal*, October 14.
23. Mackenzie.—Lectures on Throat-Diseases. (Paralysis of the Œsophagus.) *Med. Times and Gaz.*, November 18.
    (Spasmodic Stricture of the Œsophagus.) *Med. Times and Gaz.*, October 21.
24. James.—An Article on Foreign Bodies in the Air-Passages. A *résumé* of recently reported Cases, and Essays on the Subject. *The Doctor*, November 1.
25. Spitta.—Foreign Bodies in the Air-Passages. *Lancet*, September 16.
26. Stevens.—A Case of Foreign Body in the Air-Passages. *Boston Med. and Surg. Reporter*, October 19.
27. Fisher.—A Curious Cause for Vomiting in an Infant. A Brass Ring Hooked over the Epiglottis. *N. Y. Medical Record*, December 2.
28. Marcacci.—On a Case of Tracheotomy for the Removal of a Pin penetrating the Larynx. *Lo Sperimentale*, October.
29. Schüller.—On the Position of Tracheotomy in Croup. *Deut. med. Wochensch.*, September 9, 16.
30. Böcker.—On Inhalations after Tracheotomy. *Deut. med. Wochensch.*, July 8.
31. Lievling and Cayley.—Two Cases of Membranous Croup, in which Tracheotomy was successfully performed; and Editorial Article on the Question of Tracheotomy in Croup and Diphtheria. *Medical Times and Gazette*, November 1.
32. Bókai.—On Retro-Pharyngeal Abscess in Children. *All. Wiener med. Zeitung*, No. 38.
33. Laveran.—A Case of Tuberculous Ulceration of the Velum. *Bull. Gén. de Thérap.*, October 30.
34. Taylor.—A Case of Fatty Tumor behind the Pharynx. *Lancet*, November 11.
35. Heath.—A Case of Sarcoma of the Hard Palate; Removal, Recovery, Drawing. *Lancet*, November 18.
36. Fränkel.—On Miliary Tuberculosis of the Pharynx. *Berlin. klin. Wochensch.*, No. 46.
37. Thain.—On the Treatment of Quinsy. *Lancet*, September 30.
38. Gosselin.—Discussion: Obliteration of the Posterior Orifices of Nasal Fossæ and a Case of Congenital Obliteration of the Posterior Nares, *Gaz. Méd. de Paris*, No. 36.
39. Mauriac.—Lectures on Naso-Pharyngeal Syphilis. *Gaz. Méd. de Paris*, Nos. 38, 42, 45. Continuation of Nos. 2, 3, 6, 9, 12, 17, 20, 24.
40. Krishaber.—On the Causation of Nasal Voice, etc. *Ann. des Mal. de l'Oreille et du Larynx*, tome ii., No. 4.
41. Thomas.—On the Treatment of Foreign Bodies in the Pharynx. *Birmingham Med. Rev.*, July.
42. Apolant.—On the Extraction of Foreign Bodies from the Nose. *Deut. Zeitschr. für pract. Med.*, No. 20.
43. Schalle-Ninaus, Magnus, and Kessel.—A Discussion on the Acci-

dents produced by the Use of the Nasal Douche; Report of Congress at Gratz, in *Arch. für Ohrenheilk.*, No. x., p. 272.

44. Casabianca.—The Affections of the Septum Nasi. Paris. Delahaye, 1876.
45. Catti.—On the Treatment of Diseases of the Nose; Med. Soc. of Vienna. *Lond. Med. Record*, November 15, 1876.
46. Löwenstamm.—On a Case of Post-Pharyngeal Abscess. *Med.-Chir. Centralblatt*, No. 35.
47. Lagoanère.—An Essay on Rheumatic and Gouty Angina. Paris. Delahaye, 1876.
48. Beard.—New Facts and Suggestions relating to Hay Fever. *Med. Record*, No. 309, October 7.
49. Sanundès.—Method of preventing Cloudiness on Laryngoscopic Mirrors. *L'Union Méd.*, September 23.
50. Mason.—Watermelon Seed in the Trachea; Tracheotomy. N. Y. Path. Soc. *N. Y. Med. Record*, No. 319, December 16.

1. The patient, aged fifty-four, presented himself in June, 1874, for laryngoscopic examination on account of a hoarseness which had commenced in 1867. The inspection showed it to be due to a small fibroid growth situated upon the left vocal cord. The patient refused an operation for its removal. During the winter of 1874–'5, both absolute aphonia and severe dyspnœa occurred; and in February the epileptic attacks commenced, occurring at intervals of a few weeks, and usually in the night. In March, the patient was seized with paralysis of the left arm and leg, and of the muscles supplied by the left facial nerve. In July, his condition had become progressively so much worse, and his epileptic seizures being considered as due to the interference with the respiration, an operation was no longer deferred. The tumor, which had grown to a very large size, filling the whole laryngeal cavity, until a small passage alone remained posteriorly for the entrance of air into the lungs, was removed by means of the unguarded laryngeal knife successfully, and immediate general improvement followed, the most important point being that, from the time of the operation until that of the report (some five months), no further epileptic seizures had taken place.

Sommerbrodt explains the relation of cause and effect between the two conditions as follows: The fibroid tumor, from its size, caused marked obstruction to the respiratory current, consequent stagnation of air on the lungs, and accumulation of carbonic-acid gas; irritation of the pneumogastrics resulted from this condition, which, being communicated to the medulla, was, the predisposition of the patient to epilepsy being admitted (an investigation of his antecedents showed that fifteen years back he had suffered from similar epileptic attacks, which were due to the irritation of a cicatrix upon the back of the hand, and had disappeared after the excision of the cicatricial tissue), the cause of his seizures.

2. Jurasz's idea is to elevate the epiglottis, by transfixing its median glosso-epiglottidean ligament with a threaded needle attached to a suitable right-angled rod, with handle, and then making traction upon the threads which are brought out of the patient's mouth. He asserts that the procedure answers admirably, and brings into view, in a difficult case, not only the general laryngeal parts, sometimes invisible even in an easy case, but the inner and lower parts of the epiglottis as well. During an operative procedure, the patient himself holds the threads, and draws upon them.

4. In Klemm's interesting paper we find a further development of his method of diagnosticating lesions of the vocal cords, which affect their vibratory powers, and produce various grades of hoarseness up to complete aphonia, by means of a delicate or sensitive flame and a rotating glass (the method has already been described in Report No. II., 1876). The article

also contains a complete detailed description of his apparatus, and the proper method of using it, together with remarks on its practical worth as a diagnostic means, and on some of the points in differential diagnosis between the abnormal and normal vocal tones or notes. In conclusion, some practical illustrations are given, accompanied by plates of the "flame-pictures" produced by the vibrations of normal and diseased vocal cords. These latter are curious and interesting, and will repay inspection. In the first class, we see those caused by a healthy or normal vibration of the cords (tenor). 1. In a high tone. 2. In a deep one. 3, 4, 5, 6. By notes of the scale between these two extremes. In the second class, 8 to 14 are pictures produced by patients in whom existed more or less hoarseness, due to various causes, laryngitis, etc.; and in the third class we have pictures which show marked hoarseness due to laryngeal phthisis, polypi, and paralyses, 15 to 23.

8. James M., a healthy boy, aged five, two hours before admission into hospital, had sucked some boiling water from a kettle. His lips were blanched and blistered, his tongue swollen, and the uvula and tonsils were also swollen, the former looking watery and semi-transparent from the exudation of serum into its tissues. At this time his breathing was tranquil, but it gradually became stridulous; five hours later it was markedly so, and there were then retraction of the lower regions of the thorax and decided dyspnœa. In this emergency, tracheotomy was performed; operation followed by immediate relief. Boy placed under a blanket awning, and a vigorous steaming kept up. Ten days later, tube corked, and on the fourteenth day removed. From this time the boy became rapidly convalescent; the external and tracheal wounds healed without any trouble.

10. Under the title of laryngological observations and experiences, Hôpmann communicates to the above journal an article on the predisposition which the mucous membrane of the vocal cords shows to the production of new formations or outgrowths of a benign character. The article, though a long one, is of interest, and will repay perusal. Our space will not permit us to make a fair abstract of it; a short one would hardly embrace its many points, and we therefore refer the reader to the original. The article closes with an original list of twenty-five cases of laryngeal growths, classified as to their nature, their location, etc., together with explanatory observations on each, and the character of the operative procedures undertaken for their removal.

25. Spitta's cases were: one of a piece of slate-pencil, which became immovably impacted in the left bronchus; and the second, a button-screw, which was ejected one month and two days after the accident, with complete recovery. Tracheotomy was performed in the latter case only, and was unsuccessful, as far as removing the foreign body went. The former died on the eighth day after the accident, from a pneumonia; no operation.

26. In Stevens's case, a lady, aged seventy-nine, while at a dinner of baked beans, while attempting to swallow a little tea, suddenly coughed and strangled, with the sensation of something passing down the right side of the throat, and lodging in the chest beneath the right collar-bone. For the next five days, a short, hacking cough; on the sixth, a severe fit of coughing, during which something was felt to rise toward the throat, producing, for a few moments, an intense feeling of suffocation. A physical examination gave no clew to the situation of the foreign body.

For the next eight days, the patient was kept on opiates, in small doses, to allay irritation, though cough was at times severe; no localized pain was complained of, but general soreness of chest; auscultation disclosed nothing.

On the tenth day following, during a severe paroxysm, during which suffocation seemed imminent, a small, cooked bean, in two fragments, was ejected; all symptoms of irritation then rapidly declined.

27. The child had been perfectly well up to seven o'clock on the previous evening, when it was suddenly seized with a slight attack of vomiting, and since that time had refused the breast. When the doctor made his examination, the child was sleeping quietly in its mother's lap. There was no dyspnœa, and no increase in the normal frequency of the respirations. The pulse was regular in force and action; the skin cool and natural. Incidentally he depressed the tongue and looked into the throat, and, much to his surprise, saw a glistening object deep down in the pharynx. A second look brought it more clearly into view, and, by the aid of a pair of forceps, he removed, without difficulty, a small brass finger-ring, which had, no doubt, been picked up by the child while creeping about the floor on the previous evening. The ring was just large enough to fill that portion of the pharynx in which it was lodged, and was so placed that its axis corresponded pretty closely with the axis of the œsophagus, the anterior portion being caught and held in place by the epiglottis. The vomiting which took place was, in all probability, excited by ineffectual attempts to swallow or to reject it.

30. Böcker states that the success obtained by him through the use of inhalations after tracheotomy has induced him to publish his paper, which contains the result of his experience in seventeen cases. (Out of this number, six deaths occurred; no recoveries under two years of age.) Inhalations of vaporized substances before tracheotomy have long been in use. Lime-water, salt and water, solutions of chlorate of potash, chlorate of soda and chlorinated soda, and, more lately, carbolic and salicylic acids, have all been employed. Küchenmeister seems first to have conceived the idea of dissolving the membranes formed in croup and diphtheria. He showed that lime-water would dissolve the membrane in croup. Then Fieber recommended its local use, and Biermer published a case in which, after tracheotomy, one pint of lime-water to thirty of distilled water was used as a vapor, and he attributed the recovery to this means. Goltstein, of Breslau, applied the lime-water directly to the throat, with the aid of the laryngoscope, with good results. Weber, of Darmstadt, was the first to use lactic acid extensively, and he reported his success as overwhelming, and that he had latterly quite abandoned tracheotomy. (There are some reasons, however, to doubt if his cases were really all membranous or true croup.) Böcker purposes to try lactic acid once more, though it has not succeeded well with him, and has the disagreeable property of acting as an escharotic on the general mucous membrane of the mouth and throat, so that the little patients object to it. He uses various solutions: one-half to one per cent. solution of sodium chloride, solution of lactic acid, and solution of carbonate of potash, the salt solution being the one chiefly used, and places the inhalation apparatus only about six inches from the mouth of the tracheotomy tube.

32. Bókai's communication is based upon the observation of one hundred and forty-four cases of post-pharyngeal abscess in children. Of this number, one hundred and twenty-nine were idiopathic; three were due to the burrowing of cervical abscesses; four were secondary to vertebral disease; seven occurred in the course of scarlatina; and one was the result of an impacted foreign body (a brooch). Besides these, there were forty-three cases of lymphadenitis retropharyngealis, which terminated in resolution. The idiopathic cases were all believed to have originated in lymphadenitis. A large majority of the abscesses were situated laterally; only one-sixth occupied the median line.

In etiology, sex appeared to have no influence, except that three out of the four patients, in whom it was secondary to vertebral disease, were boys. By far the larger number (one hundred and thirty-four) occurred under four years of age, thus: eighty-six in the first year; thirty-four in the second year; and fourteen in the third year. The youngest patient was eight weeks old. Thirty-two were distinctly scrofulous; ten rachitic.

Of the one hundred and forty-four patients, one hundred and twenty were cured, eleven died, and thirteen were lost sight of. An analysis of the fatal cases gives the following results: Five out of the one hundred and twenty-nine idiopathic cases, three out of the four with vertebral disease, two of the seven scarlatina patients, and the one traumatic case. The three in whom it was secondary to cervical abscesses all recovered.

In general, it may be affirmed that the termination will be probably fatal, unless surgical aid be given.

Spontaneous bursting of the abscess must not be waited for, though it occurred in nineteen cases. Of the eleven above cited as fatal, seven were opened with the bistoury, two opened spontaneously, and in two the abscesses remained unopened.

The prognosis is unfavorable when the child is very young or weak, when the course of the disease is very acute, and when the abscess extends very low down. Of the complications, pneumonia is the most important. This occurred in ten cases—in three before the opening of the abscess, in seven after this. It was engendered, apparently, in the latter, by the admission of pus into the air-passages.

Facial paralysis occurred in three cases; perforation of the external meatus in one.

33. Laveran's case was an officer, aged thirty-seven years, who had always enjoyed good health up to within the last six months. At this time he developed a pleurisy of the right side, which was twice aspirated, and some four litres of fluid removed. During the past month, a tumefaction and roughness of the mucous membrane of the velum, giving rise to salivation, have occurred, and, at the same time, a marked swelling, hard and painless, of the right testicle coexisted. Diagnosis of tubercular infiltration and ulceration of the velum palati and tuberculous epididymitis; the right chest-wall presents some remains of the pleuritic inflammation in the stage of resolution; the apex of the same lung gives no evidences, on either auscultation or percussion, of pulmonary tuberculosis.

34. At a meeting of the Pathological Society of London, held on the 7th of November, Taylor exhibited a specimen of fatty tumor behind the pharynx which, during life, had simulated an enlarged thyroid with retro-pharyngeal abscess. The patient was four years of age, and had suffered for five months with difficulty in swallowing, when the neck was noticed to be enlarged. When admitted into the Evelina Hospital the child had stridulous breathing and dysphagia. The eyes were prominent, and the swelling in front of the neck resembled an enlarged thyroid gland moving with the larynx, being soft and elastic, and traversed by large veins. The carotid arteries were pressed outward by the tumor. The dysphagia was explained by a soft, fluctuating swelling at the back of the pharynx, limited above by the soft palate. This was punctured, but no pus issued, and no relief was given, and, later, Mr. Lucas and Mr. Howse saw the case. All concurred in the diagnosis of post-pharyngeal abscess, and a free incision was made more than once into the swelling, again with no result. Finally, before death, tracheotomy had to be performed to relieve the urgent dyspnœa.

On examination, the thyroid gland was found to be of normal size. A large, lipomatous mass existed behind the pharynx, and, passing down behind the gullet, projected forward on each side of the larynx. Above, a portion of the growth, somewhat separated from the rest, had projected into the pharynx, and led to the diagnosis of post-pharyngeal abscess. The lipoma sprang from the connective tissue, and not from any of the organs in the neighborhood.

Mr. Lucas, who had seen the case during life, recapitulated the grounds which had led to the erroneous diagnosis. The post-pharyngeal swelling and the tumor in front of the neck seemed then to be quite separate, whereas they really formed part of the same mass.

Mr. Howse said that so convinced was he that there was a post-pharyngeal abscess, that, failing to get pus on a first attempt, he made a deeper incision in order to empty it. The fluidity of fat at the temperature of the body produced perfect fluctuation, and it was not possible to introduce more than two fingers into the child's throat, so that any lobulation the growth presented could not be felt. Even at the autopsy the appearance, presented on exposure of the posterior wall of the pharynx, resembled that of an abscess.

37. Mr. Thain writes that, having studied a rather extensive number of these common affections, he has arrived at the following conclusions: Gargles of tannin, alum, and similar astringents are usually valueless. Alum, for example, will not astringe the vessels sufficiently to press back the inflammation. His plan is to apply hot fomentations, with a few drops of turpentine, externally to the throat, and then to wrap the whole neck in flannel. Constant heat, moisture, and mild counter-irritation are to be kept up by frequent changing of these applications; the feet must at once be put in a hot mustard-bath, and, if the patient will then get into bed between the blankets, so much the better.

Gargles, as hot as can be borne, must be begun as soon as possible, and the most useful is a watery solution of carbolic acid (1:40.) This has a soothing effect on the inflamed mucous membrane, besides sweetening the foul breath. If gargling cannot be performed, carbolic acid in glycerine (1:20 or 1:30) should be frequently applied, by means of a feather, to the parts. A brisk salient aperient may be advisable. By following this plan of treatment, Mr. Thain declares that the inflammation subsides in a few hours, never running on to suppuration, and then a simple alum gargle may be serviceable. The advantages of the plan are: 1. The carbolic acid relieves pain, checks hawking and tickling of the throat, and sweetens the foul breath. 2. The glycerine keeps moist the dry, irritated, mucous membrane. 3. The hot gargle, the fomentations, and the foot-bath rapidly relieve the active congestion.

38. At the sitting of the French Academy of Medicine, August 26, 1876, some interesting facts were brought forward on this subject. Depaul made a report on a patient of M. Bitot of Bordeaux. The posterior orifices of the nasal fossæ in this case were entirely absent, their places being occupied by two triangular bones, articulating with one another and with the surrounding bones. Bitot was able to collate only two similar cases. In the case reported by M. Depaul there were additional deformities—only one optic foramen, through which passed the two optic nerves to the orbital cavities; there was also hare-lip. Depaul himself met with a similar case of obliteration of the posterior orifices in a subject in whom there coexisted patency of the foramen of Botal ("*trou de Botal*"). It was observed that children thus affected die of inanition; as, being unable to breathe through the nose, they cannot suck for any time. M. Gosselin mentioned a case of unilateral obliteration existing in a girl of seventeen, to whom the attention of her physicians in the country had been called, on account of a certain difficulty in respiration. Her symptoms resembled those produced by an acute coryza, and were supposed to be due to an obliteration of the nasal passages by a polyp or a tumor. A sound or a stylet could

not be passed into the pharynx through the nose, nor water nor air injected.

Gosselin, upon passing his finger behind the velum, was able to detect at the point where the posterior nares should be felt a plane surface, hard and resistant, and considered its nature to be similar to that in Bitot's patient.

M. Richet described a case of complete accidental obliteration of the nasal fossæ, in which he had successfully operated. The patient was a sailor, aged thirty-five, whose soft palate had become adherent to the posterior wall of the pharynx. In consequence of cicatrization after syphilitic ulceration, the patient could neither taste nor smell; the velum was adherent throughout to the pharyngeal mucous membrane, not the smallest opening existing. Richet introduced a trochar and canula through the nose, and cut down from the mouth on the extremity of the trochar, which was pressed down on the velum. India-rubber tubes were then introduced by Belloc's sound, and their extremities fastened. Next day the patient had recovered taste and smell, but he suffered much from the presence of the tubes. In a few days they were removed and replaced by an instrument shaped like a shirt-stud, perforated in the middle, having an upper or nasal plate and a lower or palatine plate. When he left the hospital he could taste and smell, but, as his plate was perforate and immovable, fluids escaped partly by the nose.

46. The case occurred on a boy of three years, who had previously been quite healthy. For a week before he was seen, he had been feverish, and had had difficulty in swallowing and breathing. Rude attempts had been made to raise what had been looked upon as a displaced tonsil. The child was pale, the mouth wide open, the head retracted, and the breathing difficult and snoring. A deeply-seated swelling was seen behind the left angle of the jaw.

On examining the throat, the posterior wall of the pharynx showed a prominence which, toward the left side, had a yellowish color. Fluctuation was distinct at this part. The cervical glands and vertebræ appeared quite healthy.

The parents at first refused consent to an operation, and it was not until the child was in imminent danger of suffocation that this was undertaken. An incision was made, and the flow of pus accelerated by pressure upon the swelling in the neck. Afterward, the throat was syringed with lukewarm water.

Recovery was complete.

49. The author communicates a new (?) method or process of preventing the laryngeal mirror from becoming obscure. This consists in passing lightly over the mirror a cloth steeped in glycerine. The watery vapor contained in the expired air is dissolved completely in the glycerine, and the cloud does not form.

50. The patient, aged six, had four days previously swallowed a water-melon seed, which had passed into the trachea. There was constant cough, some dyspnœa, and a husky voice. Auscultation during cough demonstrated the presence of the foreign body in the trachea. Tracheotomy below the isthmus was done, but nothing found, and the seed was supposed to have been coughed out; the introduction of curved forceps was also without result. As the patient breathed more quietly, a tube was introduced and left in position until two days later, when it was removed. Nine days later, paroxysmal cough recurred, and again the foreign body could be heard in the trachea.

The original opening was dilated, and, as soon as sufficiently complete, a violent paroxysm of coughing ensued, and the seed was expelled.

The interesting points in the case are two:

1. The seed remained in the boy's trachea thirteen days.
2. It illustrates how easily the surgeon might be deceived with regard to foreign bodies passing out after an opening into the trachea had been made.

CONTRIBUTED BY DRS. GEORGE R. CUTTER, EDWARD FRANKEL, E. H. BRADFORD, AND W. T. BULL.

SURGERY.

Treatment of Diffuse Phlegmonous Periostitis by Prompt Resection.—Duplay reports the case of a boy sixteen years old, suffering from diffuse periostitis of the tibia, with separation of the inferior epiphysis. The constitutional symptoms were very severe, temperature 104°, and even higher, repeated epistaxes, diarrhœa, etc. Locally, at first there were œdema, pain and redness over the lower and inner face of the tibia; an incision gave issue to a large amount of pus, and showed the bone to be denuded to a great extent; eighteen days later, the temperature remaining at 104°, and the general condition bad, the shoulder became painful and swollen; three days later the tibia was found to be almost entirely denuded, and a separation of the lower epiphysis was suspected. The articulations were not involved. Resection of the entire shaft was then decided upon, but the upper epiphysis being found adherent, it was necessary to use the chain-saw and leave the upper part of the shaft; the portion removed was a little over ten inches long (twenty-six centimetres). The leg was placed in a plaster-splint, and the wound dressed with lint soaked in chlorine-water. The patient immediately began to improve, and the wound filled with healthy granulations, but it ultimately became necessary to remove the portion of the shaft which had been left adherent to the upper epiphysis. In about three months the bone was entirely removed, the limb being nearly an inch shorter than its fellow. Duplay mentions three other cases in which the same operation was performed, with equally good results.

In the discussion which followed, it was generally admitted that, in these cases of diffuse periostitis (typhus of the limbs), the whole bone became necrosed, and that it was very desirable to remove it early, and not allow it to become an invaginated sequestrum, even if the patient's strength were sufficient to accomplish the latter; and attention was drawn to the difference between this variety and simple suppurative periostitis, in which latter the general symptoms are slight or lacking, and the necrosis limited. Diffuse periostitis is often due to a general cause, such as rheumatism, and its onset resembles that of typhoid fever.—*Mém. de la Soc. de Chirurgie*, 1875, p. 734. E. F.

Obliteration of Cysts by the Injection of Chloride of Zinc.—The difficulty of producing an alterative effect, by means of the ordinary irritants, upon the walls of cysts with thick or semi-fluid contents, has led M. Th. Anger to employ the very powerful caustic chloride of zinc, with the double object of affecting the wall, and of exerting an action similar to that of digestion upon the contents. He employed one drop of the deliquescent chloride, or three drops of a very strong solution, taking care that it should be thrown into the centre of the cyst, and should not come into contact with the wall during withdrawal of the canula. In two cases of hygroma the results were very satisfactory, less so in two of ranula, lively inflammation being excited in both cases, and a repetition being necessary in one; the second application was followed by a supra-hyoid abscess.—*Mém. de la Soc. de Chirurgie*, 1875, p. 831. E. F.

Inguinal Adenitis mistaken for Strangulated Femoral Hernia. (Crussard, in *Revue Médicale de l'Est*, tome vi., No. 5.)—A female, aged forty-seven, who had suffered from a reducible femoral hernia for eleven years, observed at the usual point of exit of the rupture a painful tumor, of the size of a walnut, very tender to pressure. Constipation existed, and vomiting occurred. A physician made attempts at reduction, and ordered a bath. The writer, on the strength of the symptoms, diagnosticated a hernia, but was led to believe the tumor an inflamed gland, from the fact that, on a former occasion, when he had reduced the rupture, it was of much greater size. Subsequent suppuration confirmed his view.—*Centralblatt für Chirurgie*, No. 41, 1876. W. T. B.

Plexiform Fibro-Neuroma of the Nerves of the Arm, with Circumscribed Hypertrophy of the Skin, and Development of Sarcomata. (Von Winiwater, in *Archiv für klin. Chir.*, 1876, Bd. xix., Hft. 4.)—A tumor of the scapular region, in a man of thirty-six years, was excised six months before he was seen by the writer. After the wound healed, a small tumor, which had existed on the inner side of the arm since the patient's eighth year, began to grow rapidly, and radial paralysis developed, with severe radiating pains, especially on the outer side of the arm. On examination, the skin of the lower part of the shoulder was found to be of a brownish color, with a few coarse hairs, and adherent to the thickened subcutaneous tissue, which contained a number of firm nodules. On the outer side of the shoulder, a moderately firm tumor, cartilaginous at one point, was closely united with the deltoid, and extended to the middle third of the arm. In the bicipital groove was a tumor of varying density, which extended to the elbow, and appeared to be united with the vessels and nerves, while a third growth, spindle-formed, movable, and not sensitive, was situated just below the elbow, on the palmar surface of the forearm. Billroth diagnosticated a plexiform neuroma, with sarcomata, developing from a part of the tumor which appeared first, and removed the growth occupying the bicipital groove, together with a portion of a large nerve included in it. On the fourth day, gangrene of the arm occurred; disarticulation at the shoulder-joint was performed, and patient died four days later. The autopsy revealed a purulent collection in right pleural cavity, and a metastatic sarcoma of the upper lobe of right lung. Thickening of the branches of the brachial plexus existed as far as the spinal canal, and was due to a diffused hypertrophy, which involved even the cutaneous branches in the region of the shoulder, and was combined with hypertrophy of the subcutaneous tissue and pigmentation of the skin. The tumor of the shoulder was a pure plexiform neuroma; the others were true sarcomata, arising from the nervous branches. The author gives the details of an elaborate microscopical examination, only the bare results of which can be mentioned here. Thickening of the nerves is due to a new growth of the connective tissue and young nerve-fibres (fibro-neuroma), while the sarcomatous tumors are derived from a degeneration of these thickened ("fibro-neuromatous") branches.—*Centralblatt für Chirurgie*, No. 39, 1876.
W. T. B.

New Method of curing External Aneurisms.—Prof. Caselli adds a new observation of great practical interest to the numerous series of facts regarding the therapeutics of aneurism. A patient, aged thirty-five, was admitted to the Bologna hospital with a traumatic false aneurism of the left thigh, at its middle third measuring seventeen cm. in the vertical, and twelve cm. in its transverse diameter. Compression and other methods of treatment were unsuccessful. One day, in examining the tumor, Dr. Caselli gave it a quarter of a turn, and found that the pulsation and *bruit* immediately ceased; this was repeated several times, with the same effect, the turning of the tumor closing the efferent vessels quite effectively. This position was

then maintained by suitable bandages, and after four days the tumor was found to be hard and without pulsation. The patient was soon discharged cured.—*Ann. Univ. di Med.* and *Gazz. Med. Ital. Venete*, No. 40, 1876.
G. R. C.

Coxalgia.—M. Ollier recently read, before one of the medical societies of Paris, a paper on coxalgia. The remarks of so distinguished a surgeon are always of interest, and they are particularly so in this question, as being different from the opinion usually accepted. He paid particular attention to these three points:

1. Importance of continued extension.
2. The possibility of cure with motion.
3. The indications for resection.

1. Bonnet was the first to introduce the rational treatment of coxalgia with acute symptoms, in advising forced replacement followed by absolute rest. If this method is employed judiciously, fine results may be obtained. Surgeons who have employed faulty apparatuses have been unsuccessful, and in this way been led to adopt resection. Bonnet died before completing his favorite method of forced replacement by the addition of continued extension added to immobilization. Extension, however, is only applicable to a certain number of cases. It should not be employed in cases where there is great pain after replacement. In these cases absolute rest alone should be used as the surest means of combating severe pain. The application of a stiff bandage does not constitute extension, as the ascension of the head of the femur cannot in this way be prevented. To prevent this, M. Ollier uses at first extension both by day and night; afterward, extension at night, to be continued for a long time, even when a cure appears to have been effected.

2. Motion is not to be expected except in cases without osseous lesion, which are unfortunately not common. If the coxo-femoral articulation has been subjected to force, and solid adhesions have been broken, they are necessarily formed again, and anchylosis is the best result we can expect. If, however, the coxalgia is rheumatic, the violent measures of reduction help restore to a degree normal motion.

3. M. Ollier states that he is but little in favor of resection of the hip, thought of so highly by many surgeons as the only resource in suppurative coxalgia. He wishes to reserve the operation for special and rare cases where the head of the femur is separated (so that the operation is really the removal of a sequestrum), and to those cases in which the pus accumulated in the articular *cul-de-sac* cannot be evacuated.—*Gaz. Heb.*, August 25, 1876.
E. H. B.

Resection of the Upper Jaw.—M. Letiévant, surgeon to the Hôtel Dieu at Lyons, has called attention to the following disadvantages following section of the maxillary nerve in resection of the upper jaw: A case came under his observation, which he reports as illustrating the effects of cutting off the nerve-supply from the tissues. Eight months after the operation of resection of the upper jaw there was a paralysis of the right corner of the upper lip; electricity could cause no reaction of the levator muscles; there was almost complete loss of sensation in the region of the infra-orbital; there was flattening of the cheek on the side where the operation had been performed.

To obviate this injury to the muscles by the deprivation of the sensory nervous supply in a second case, M. Letiévant made use of a slight modification of the regular procedure of resection, chiseling out the canal of the infra-orbital nerve, raising it from its bed, and preserving it with the rest of the flap. When this portion of the bone is normal, and it usually is, a piece of the bone is to be preserved, chiseled out on each side of the bed of the nerve; when the rest of the jaw is removed, this will serve to support the cheek and protect the nerve, and the nervous supply to the cheek remains unimpaired.

The result eight months afterward was quite satisfactory; there was no impairment of motion or sensation.—*Gaz. Hebd.*, September 29, 1876.
E. H. B.

THEORY AND PRACTICE.

Poisoning by Unwholesome Meat.—Dr. Müller relates (*Deutsch. Zeitschr. f. prakt. Med.*) a curious series of poisonings manifested during the past year in Middelburg, Holland, in three hundred and forty-three individuals who had eaten more or less of salt pork procured from the same establishment.

The first symptoms were *malaise* and vomiting, followed by diarrhœa. The alvine discharges were yellow, then fetid and green, and were preceded by intense intestinal colic. There were severe epigastric pain, tenesmus, intense thirst, scarcity of urine, temperature 39° C., pulse from 100 to 120. In some of the cases these symptoms returned during convalescence, assuming in some an intermittent character. Herpes labialis was associated with the fever in many of the cases. Six of the cases terminated fatally. Only two autopsies were made, and these were not very instructive. Nothing positive was ascertained by feeding animals with the suspected meat.—*Lo Sperimentale*, September, 1876. G. R. C.

Iron by Hypodermic Injection.—In pernicious anæmia, when the absorption of medicine by the stomach is no longer possible, Prof. Huguenin, of Zurich, does not hesitate to administer it by hypodermic injection. He uses a formula in which the pyrophosphate of iron is mixed with sulphate of ammonia, in the proportion of ten parts to fifty of distilled water, so that an ordinary Pravaz syringe contains three centigrammes of iron. Immediately after the injection there are redness of the skin, œdema, and occasionally some cardiac phenomena; all this soon disappears, however, and the general condition improves.—*Correspondenzbl. f. Schw. Aerzte*, and *Gazz. Med. Ital. Venete*, No. 36, 1876. G. R. C.

On the Relations of Skin-Diseases to Diabetes.—Prof. Pick, at the Medical Society of Bohemia, observed that in considering this subject three conditions should be borne in mind: 1. The skin-disease may be idiopathic, simply coincident with the other disease, and developing just as it would in individuals without other concurrent disease, and perhaps modified in only a slight degree by the concurrent disease. 2. The skin-disease may originate from a cause which has also given rise to the concurrent disease; it can thus precede the latter, accompany, or follow it. 3. The skin-disease is the direct effect of the changes which have taken place in the organization by the other disease. The first category comprises the various eruptions caused by animal and vegetable parasites, the acute exanthemata, and syphilis, the actual course of which is in no way modified by its concurrence with diabetes. The rare occurrence of diabetes in a case of inveterate psoriasis, no change being determined by the former disease, was mentioned. The author further refers to various forms of eczema, which develop from ordinary causes; thus those on the inner surface of the thigh, on the genitals, etc., in obese persons. According to the degree of the diabetes, these eruptions may become modified in their characters. Notwithstanding these modifications, which may arouse the suspicion of the existence of diabetes, these forms can only be classed as mere coincident skin-diseases. As belonging to the second category, the author mentions certain forms of pruritus cutaneus and furunculosis, which existed before the diabetes manifested itself, and are traceable to affections of the central nervous system; these have been looked upon, provided diabetes follows them, as cases of latent diabetes, in which opinion the author does not concur; he arrives at the conclusion, from the observation of such cases of pruritus and furunculosis, that not in all but in very many cases in which the skin manifestations precede the diabetes, they are not to be looked upon as the effect of the latter, but that they originate in the original cause—derangements of the central nervous system. The skin-diseases of the third group, which are to be considered as the direct consequence of the diabetes, and are called forth by the irritation caused by the sugar in the blood, or by the polyuria, etc., are certain forms of eczema, xeroderma, pruritus, and furunculosis, carbuncle, and lastly a peculiar affection of the mucous membrane of the mouth, which the author calls epitheliosis mucosæ oris, and separates from similar phenomena occasioned by syphilis. In conclusion, the author lays stress on the importance of examining the urine in the above skin-diseases.—*Med. Chir. Centralblatt*, 34, 1876. E. F.

DISEASES OF WOMEN.

Imperforate Vagina.—At the August meeting of the Académie de Médecine, M. Léon le Fort presented a patient on whom the operation of vaginoplasty had been performed without the aid of cutting instruments. The patient, twenty-six years old, from the age of fifteen years had experienced the general symptoms which accompany the catamenia; from the absence of the vagina, however, the menstrual flow was substituted by hæmorrhages from the lungs, from the skin of the legs, and epistaxis accompanied by intense and often terrible pains. She entered the Hôpital de la Pitié in 1872, where M. Léon Labbé performed six successive operations, with no further result than that of forming a vulvar infundibulum several centimetres in depth. After having remained eighteen months in the hospital, the patient, discouraged, left the hospital. The pains and vicarious hæmorrhages continuing, she entered the Hôpital Beaujou in July, 1875, where M. Th. Auger performed a seventh operation, whereby the depth of the infundibulum was augmented, but which was followed by a severe pelvic peritonitis. Further interference was abstained from until January, 1876, when Le Fort introduced a cylinder of box-wood, supplied at its upper end with a metallic wire, which was connected with the positive pole of a small battery in sulphate of copper. The negative pole was supplied with a metallic plate surrounded by wet linen, and placed on the abdomen; the mild current was not felt by the patient, and only gave rise to small eschars at the points of immediate contact of the metallic *réophores.* The apparatus was adjusted every evening and left in place throughout the night. The cylinder gradually penetrated into the vesico-rectal septum, and on February 26th it had advanced up to the uterine neck; then, for the first time, the patient at her menstrual epoch had a moderate discharge of blood through the vagina, but still accompanied by abdominal pains and slight hæmoptysis. At the following period, however, the treatment having been continued, a sufficiently large canal had been established, and the periods became normal, painless, and regular. On the 1st of July she reëntered the hospital for the purpose of having the vagina enlarged. Examination with the speculum showed a small and irregular uterine neck at a depth of ten centimetres. The uterine sound penetrated to a depth of five and a half centimetres. In order to render the result permanent and avoid stricture of the artificial canal, the patient was ordered at times to introduce an intro-vaginal cylindro-conical ivory or box-wood pessary at night.—*Gaz. Méd. de Paris*, No. 32, 1876. E. F.

One of the Causes of Vaginismus.—In the Petersburg *Med. Wchschr.*, Dr. Johannsen reports the case of a woman married six years, without children, who had suffered since her marriage from extremely intense pains in the vulvar region during coition and micturition. She had submitted to almost every variety of treatment, without effect. On examination, two yellow points, as large as pin's-heads, were found in the mucous membrane of the lower wall of the urethro-vaginal septum; these were ascertained to be the openings of two incomplete fistulæ in the urethro-vaginal septum. On probing one of them, five millimetres in length, the same intense pains were produced as when the urethra was pressed against the symphysis. This fistula was split toward the urethra, and healed under the occasional application of nitrate of silver. The smaller fistula was also cauterized, but did not close. The author places the origin of these fistulæ in the lacunæ of the female urethra (analogous to the glands of Littré of the male urethra), and believes the exciting cause to be the act of coition. Perhaps the first traumatism may have been sufficient to cause inflammation of the gland, the occlusion of its duct with subsequent abscess into the urethra, the urine causing the fistula to undergo gradual enlargement. The author thinks it more probable, however, that the secretion of a chronic gonorrhœa may have been transplanted to this location. He was led to this supposition by the presence of a conical indurated cervix with a small, rounded os, a form of cervicitis which Martin states is frequently due to an inveterate gonorrhœa of the husband; furthermore by the patient's statement that, four years before, she had had small warts on the labia, which in all probability were condylomata. E. F.

PHYSIOLOGY.

Local Action of Astringents on the Vessels.—Dr. Hugo Rosenstirn (*J. M. Rossbach's pharmak. Untersuchungen*, 11, 1–2, 1876) has made some very interesting investigations of the action of the so-called astringents on the size of the vessels. His experiments were made on the mesenteries of curarized frogs. The transparent membrane was stretched over a cork ring, and the size of the blood-current in a selected vessel measured with the eye-piece micrometer; then, by means of a pipette, a uniformly large drop of the 0.1–50.0 per cent. solution of the astringent applied to the vessel. The metronome was immediately started, and the time between the application and the first perceptible change in the size of the blood-current was thus easily determined. The following substances were thus tested: 1. Argentum nitricum. This soon caused in the veins as well as the arteries, without any preceding dilatation, a noticeable contraction of the vessels, retardation of the blood-current within them, and even for the most part complete cessation of the circulation. The maximal contraction of the vessels, to the half of the original lumen, occurred in sixteen, eighteen, and fifty seconds, according to the concentration of the solution used. Nitrate of silver thus proved itself to be an astringent in the old sense of the word. Thorough washing of the preparation with a six-per-cent. solution of common salt reëstablished the circulation in the large vessels.

2. Acidum tannicum, gallicum, and pyrogallicum, directly contradict-

ed the opinion usually formed of them, since they not only caused no contraction, but actually caused a dilatation of the lumen of the arteries, veins, and capillaries, to double the original size. It was ascertained that a vessel which had been dilated by the tannin could be regularly caused to contract by the subsequent application of nitrate of silver. The dilatation also occurred after the removal of the spinal column, the destruction of the medulla, and even of the brain; it is, therefore, not of a reflectorial nature.

3. Plumbum aceticum proved to be a true but less energetic astringent than the nitrate of siver; that is, it caused a considerable contraction of the arteries and veins, but not of the capillaries. It also frequently caused a cessation of the circulation, like the nitrate of silver. A vessel contracted by the lead-salt contracted still further on the application of nitrate of silver. Acetate of lead caused white coagula to form in the centre of the vessel, and our author concludes that the adhesiveness of the white blood-corpuscles is increased by this salt, and there is thus caused a predisposition for the formation of coagula.

4. Ferrum sesquichloratum is also an astringent in the old sense, though it acts much less energetically on the walls of the vessels than the silver or lead salts. The ten-per-cent. solution produced no result, a fifty-per-cent solution was necessary for the experiments; even with the latter there was often no effect produced. It caused the circulation to cease in the veins, arteries, and capillaries, but also caused dilatation of the walls of the same capillaries. The author conjectures that the iron solution may paralyze the delicate capillary walls, while it irritates the larger venous or arterial walls.

5. Alumen. Rosenstirn was unable to determine whether this salt contracted or dilated the mesenteric vessels, since the results obtained were very contradictory, and in most of the experiments no measurable change could be perceived; in a few there was contraction of the vessels, but in a larger number dilatation occurred.—*Schmidt's Jahrbücher*, No. 7, 1876.

G. R. C.

OBSTETRICS.

Subcutaneous Emphysema occurring during Parturition.—This rare complication of parturition was observed by Dr. P. Glekschieff (*Russische med. Rundschau*, Bd. 2, 1872) in the obstetrical clinic of Moscow, under the following circumstances: In a primipara, twenty-four years of age, the forceps were applied to terminate a labor unduly prolonged by reason of a contracted pelvis. During the operation a tumefaction of the neck was observed above the right clavicle, and this tumefaction increased largely during the uterine contractions. The forceps had been applied at the residence of the patient; she was then removed to the clinic. At her entrance here there was observed an intumescence of the face, and especially of the palpebræ, the neck and the upper portion of the thorax. This swelling constantly increased, and a manifest crepitation could be felt with the finger. Nothing in particular could be perceived in the respiratory organs, except a certain weakness of the respiration on the right side. A live child was delivered with the forceps, and the emphysema disappeared in twelve days, without any treatment.

This case of subcutaneous emphysema does not belong to those common cases of the collection of air under the skin observed after wounds of the neck, chest, trachea, and œsophagus. It was due to the passage of air from the lungs to the skin from laceration of the pulmonary tissue.

Relying on the observations of this phenomenon given by Traube and Oppolzer, we may conclude that the air passed from the lungs through lacerations of the pulmonary vesicles, as a result of intense muscular contractions, thence through the mediastinum, and then beneath the skin of the neck.—*Lo Sperimentale*, August, 1876. G. R. C.

How the Uterus is supported in Multipara.—Prof. Voss, of Christiania, commences his article with an *exposé* of the theories which prevail in anatomy and gynecology concerning the connections of the uterus in the pelvis minor. He endeavors to prove that the point of departure of the descriptions has always been the virginal type. He gives the following *résumé* of his opinions:

1. The anatomists and gynecologists regard the position of the uterus in virgins as the normal position.
2. This position has this characteristic, that the uterus is fixed by the ligaments, and has a direction which corresponds to the axis of the pelvis.
3. According to the author's opinion, on the contrary, it is the position of the uterus in women who have borne children which should be regarded as normal.
4. In these, the position of the uterus is determined by the floor of the pelvis, the surrounding organs, especially the rectum and the bladder, and by the position of the entire body.
5. The axis of the uterus cuts that of the pelvis at an acute angle, open posteriorly, because the uterus rests immediately on the rectum by its posterior surface.
6. The so-called ligaments present but an insignificant support for the uterus.

Then follows an anatomical *exposé* of the floor of the pelvis, regarded as a support for the viscera of the pelvis, which may be thus summarized: In regarding the supporting apparatus in its totality, and commencing from without, the first thing presented is the muscular structure of the perinæum with the *nodus musculorum*, which may be elevated in an active manner. Then follow the adipose masses in the two recto-sciatic fossæ, forming coins, which may be mechanically buried in the pelvis. Then we have the thick and solid aponeurosis (*a. perinæi profunda*) which, inward and forward, extends as far as the neck of the uterus and the vagina, and posteriorly is lost in the *fascia externa levatoris ani.* Finally, we find the *m. levator ani* with the descending leaf of the pelvic aponeurosis, by means of which the bladder, vagina, and rectum, are provided with large surfaces of lateral support, which may be actively elevated and pressed toward the median line. The anterior portion of the pelvic ring and the internal obturator muscles present, without the *levator ani*, firm and invariable surfaces of support. This muscle forms an active muscular funnel which is prolonged upward in the *anus tendinei*, which close the inferior and narrowest portion of the funnel formed by the pelvic aponeurosis. On this fibrous and dense base repose the cellular and adipose tissue and the vessels, covered in their turn by the peritonæum, the folds of which are not supports for the uterus in virgins. The author's views are well illustrated by engravings.—*Nordiskt Medicinskt Arkiv*, 8de Bandet, No. 9.

G. R. C.

New Method of ascertaining the Movements of the Pubic Bones during Pregnancy.—Examining a pregnant woman who had suffered a lesion of the symphysis pubis, Budin (*Medizinskoie Obozrenie*, Moscow, April, 1876) recognized the movement of this articulation by a method which has not yet been described by others. Causing the woman to stand up, the author introduced a finger into the vagina and extended it to the inferior margin of the articulation; he then made her walk a few steps. At every step, the finger introduced into the vagina plainly felt the movement of the bones; thus, for example, he felt that the branches of the pubis were sometimes depressed, sometimes raised. He noticed that the highest bone corresponded to the leg which was advanced at that moment, and *vice versa.* Deambulation was very difficult, and the patient experienced great pain in the pubic symphysis. Ten days after parturition, walking was easier, but the movement of the bones could still be felt. Taking advantage of this method the author desired to resolve the question whether the movability of the bones of the pubic articulation occurs during normal pregnancy. It is well known that a diversity of opinions prevails with regard to this question: some deny this mobility; others, on the contrary, admit that it occurs not only in the symphysis pubis, but also in the sacroiliac articulation.

The author has examined eighty pregnant women by the method described by him, and has arrived at the following results: During the later months of pregnancy, a certain degree of mobility existed in the pubic symphysis, in all cases. This mobility increased in proportion as the pregnancy approached its termination. The degree of mobility was, in the greater number of the cases, proportionate to the number of parturitions, but this cannot be said absolutely. In the contracted pelvis, no increased mobility has been observed, as has been asserted by Geraud and Anseaut. Except in pregnancy, no mobility of the bones has been found in women who have not had children; in women who have borne children this mobility was observed only for a longer or shorter time after parturition. Finally, the author concludes that these observations may prove that a change takes place in the articulations of the pubis during pregnancy.—*Lo Sperimentale*, August, 1876. G. R. C.

DISEASES OF CHILDREN.

Basedow's Disease in a Child.—Chovsteck describes (*Medizinskoie Obozrenie*, April, 1876) a case of Basedow's disease which occurred in a girl twelve years of age, whose parents had always been healthy. The patient had always enjoyed good health, though she was paler than her sisters. During the course of the last two years the child gradually became more pallid, readily became fatigued and frequently complained of pain in the chest. One month previous to entering the hospital, her mother noticed a swelling of the neck and projection of the eyes. Cardiophthalmus was never noticed. On entering the hospital Dr. Chovsteck noticed a remarkable protrusion of the eyeballs, the superior palpebræ were removed two to three lines from the cornea and did not follow completely the movements of the eyeball upward and downward; the pupils were moderately dilated and reacted. The carotid and thyroid arteries were dilated and pulsated more strongly than usual. The thyroid gland was remarkably increased in size; the cardiac impulse was strong and extended over several intercostal spaces. The heart-sounds were normal. Other organs healthy. The patient was treated several days with a weak continuous current, three minutes at each *séance.* No improvement noticed. There was a pulsation of the pulmonary artery, probably due to hypertrophy of the right ventricle.

This disease very seldom occurs in children; thus far four cases have been described under fifteen years of age. One has been described by Dusch which commenced at the age of four.—*Lo Sperimentale*, October, 1876. G. R. C.

Contagiousness of Acute Pemphigus in Neonati.—Since Hervieux decribed the epidemic of pemphigus in 1868, the contagiousness of this disease has been confirmed by many physicians, who thought they demonstrated that the contagion might be transmitted even by a third person. Thus, for example, pemphigus might show itself in many children in the practice of the same midwife. This last circumstance seems very doubtful to Böhm (*Jahrbüch. f. Kinderheilk.*, B. ix., 3), for it has been noticed that some diseases of undoubted contagiousness are not transmitted by means of a third person. On the other hand, the contagiousness of pemphigus is not yet demonstrated, for the inoculation of the contents of the pustules has thus far given negative results. The apparent epidemic diffusion of this disease is explained in a different manner by Böhm. He says that the pemphigus of neonati is manifested from the third to the fourteenth day, that is during the period of physiological desquamation, with which it is intimately connected. The tender skin of the child is then very sensible to irritations, hence at this period of life all kinds of eruptions are very common, and, according to Böhm pemphigus also belongs to this category. The disease may also be due to baths which are too warm. The epidemic diffusion of the disease in the practice of certain midwives is due to the latter; such epidemics in asylums are due to vitiated air, defective ventilation, etc.—*Lo Sperimentale*, October, 1876. G. R. C.

Hypnotism in a Child.—The following case is given by Bouchut (*Gaz. des Hôp.*, Nos. 25, 26): A healthy child, ten years of age, and not predisposed to nervous diseases, went to sleep spontaneously while sewing an eyelet to a button; she slept about an hour, quietly awakened and finished her work. This strange sleep is since repeated whenever she attempts to sew an eyelet, but never when sewing anything else. During the sleep the extremities are in a cataleptic condition, the pupils dilated, the pulse retarded, and a general anæsthesia of the body is noticed. The sleep lasts from one to five hours. The child also goes to sleep on fixing with her eyes a silver pencil held at a distance of ten cm. from the nose. It is, therefore, a condition of hypnotism induced by particular conditions.—*Lo Sperimentale*, October, 1876. G. R. C.

Miscellany.

The Late Dr. Thebaud.—At a recent meeting of the Medical Board of the New York Foundling Asylum, Dr. Charles C. Lee and Dr. J. B. Reynolds were appointed a committee to draw up the following resolutions on the recent death of Dr. Julius S. Thebaud.

These resolutions were ordered to be sent to the family of the deceased, and also to be inserted in the medical journals of the city.

O. D. POMEROY, M. D.,
Secretary of the Medical Board.

Whereas, It has pleased an All-wise Providence to remove from our midst our late colleague, Dr. Julius S. Thebaud: therefore, be it

Resolved, That we deeply mourn his premature death, and deplore the irreparable loss which our Board has suffered.

Resolved, That in this melancholy event the New York Foundling Asylum has been deprived not only of a steadfast friend and a judicious adviser, but of an officer whose services in the past were invaluable, and can never be forgotten.

Resolved, That not only the institution over which we had a mutual care, but the medical profession and the public, have lost a valued counselor and a true friend.

Resolved, That we tender the expression of our deepest sympathy to his bereaved family in their affliction.

J. B. Reynolds, M. D.,
Charles C. Lee, M. D.,
Committee.

Extraordinary Longevity.—Dr. B. Ornstein, Surgeon-in-Chief of the Greek Army, contributes the following communication (*Virchow's Archiv*, vol. lxvi.), which was received by the editor of the Greek newspaper of Smyrna: "Our fellow-citizen George Stravarides died to-day at the age of one hundred and thirty-two years. Though this Methuselah led a rather intemperate life, consuming daily more than one hundred drachms of brandy on the average, he was nevertheless up to the last moment of his life in the full possession of his five senses, as also of his teeth. He was still quite active, could dance and sing when intoxicated, and attended in person to his occupation of baker up to the end of his days. The deceased was born in the year 1743, during the reign of Sultan Mahmoud I., and has thus witnessed the reign of nine sultans." The reporter appends the following historical considerations: "In order that your readers may have a deeper insight into the events occurring during the long life of this individual, I may be permitted to compare it from his birth with a few simultaneous historical events. At his birth the Shah Nadir besieged Bagdad. He had attained his ninth year when the unfortunate French king, Louis XVI., was born, and was fifty years old when the latter was beheaded. He was twenty-seven years old when Orloff burnt the Turkish fleet in

Tschesme, and thirty-one when Sultan Abdul-Hamid, father of Sultan Mahmoud II., reigned. He was older by two years than Gregory V., by five years than Koraës, by twelve years than Regas the Pherraian, and by twenty-six years than the great Napoleon."

Appointments, Honors, etc.—Prof. John Cabell, of the University of Virginia, has been elected President of the Virginia State Medical Society. Dr. John J. Reid has been appointed Visiting Physician to Charity Hospital, in place of the late Dr. Woodruff.

Schiff, of Florence, Zahn, of Strasburg, and Laskowski, of Paris, occupy chairs in the University of Geneva, which is now open, and has already fifty students. It is reported that Prof. Pirogoff has been appointed by the Russian Government to take charge of the field-ambulances in the event of war. Prof. Ponfick has been called from Rostock to the chair of Pathological Anatomy at Göttingen; and Dr. Thierfelder, formerly of Leipsic, has been appointed his successor. Prof. Leyden, of Strasburg, entered on his duties as Professor of Clinical Medicine at Berlin, October 30th, as successor of Traube. Dr. Czerny, Professor of Surgery at Freiburg, has received a unanimous invitation to the chair of Surgery in the University of Heidelberg, vacant by the death of Simon. By the retirement of Mr. Simon, Mr. Sidney Jones becomes Senior Surgeon to St. Thomas's Hospital, London.

Case of Poisoning from wearing a Hat.—A noteworthy case of poisoning from wearing a hat is reported to have occurred in Stettin. A shoemaker had bought a felt hat from a well-known firm. Soon after wearing it, though the hat exerted no pressure, headache set in, with frontal swelling, followed by a pustular eruption. The eyes also became so inflamed that they closed, and the swelling began to spread to the lower part of the face. It was evident that these symptoms were due to the wearing of the hat, and, the latter having been submitted to examination by a chemist, it was ascertained that the brown-leather lining was colored with poisonous aniline—said to be a very common practice.

Albany County Medical Society.—At the last annual meeting of this Society the following officers were selected: President, J. N. Northrop; Vice-President, William H. Murray; Treasurer, A. F. Van Vrankin; Secretary, B. U. Steenburg; Delegates to State Medical Society, Thomas Beckett, H. S. Case, C. E. Whitbeck, and F. C. Curtiss; Delegates to American Medical Society, S. H. Freeman, Lorenzo Hale, J. N. Haynes, and R. H. Starkweather; Censors, Levi Moore, N. S. Snow, J. V. Lansing, and E. Van Slyke. Dr. James P. Boyd was presented with a silver pitcher, suitably inscribed, Dr. T. Hun making the presentation speech on behalf of the members of the Society.

A Rare Honor.—Dr. Thomas B. Peacock, having presented to the Royal College of Surgeons an extremely valuable collection of pathological specimens, mostly illustrating diseases of the heart, has been awarded the gold medal of the college. The collection will be added to the Hunterian Museum. Dr. Peacock is the sixth recipient of this acknowledgment. The following are the names of those who have been thus honored: In 1809, Prof. James Wilson; in 1822, Mr. James Parkinson; in 1825, Mr. Joseph Swan; in 1834, Prof. George Bennett; in 1869, William Lodewyk Crowther.

Mortality in Savannah.—The *Savannah News* publishes the following table, showing the mortality from yellow fever and other diseases, from August to November 26th:

MONTHS.	Total Deaths.	Yellow Fever.	Other Diseases.	Whites.	Blacks.
August	172	33	139	91	81
September	783	556	227	575	208
October	474	287	187	301	173
November	145	64	81	91	54
Grand total	1,574	940	634	1,058	516

Defective Weights in Drug-Stores.—The *Medical Record* of December 16th calls attention to the rather startling fact that in many cases the weights used by apothecaries in dispensing medicines are exceedingly inaccurate. Four establishments, two of them prominent ones, were visited, and in three of them the weights were found to be either above or below the standard. The defect is one of such vital importance to the public and to the profession, that steps should be taken immediately for a general and careful inspection of druggists' weights and measures.

Dr. Cutter's Translation of Frey.—In the review of this work in our last issue the concluding sentence was quoted inaccurately, inasmuch as the translator's punctuation was not observed. It occurs on the 20th (not on 21st) page, and reads as follows:

"Tissues of simple or metamorphosed cells, with partly still homogeneous, partly fibrous, and, not rarely, more firm intermediate substances."

Another Medical Journal in Ohio.—We have received the prospectus of the *Toledo Medical and Surgical Journal*, to be edited by Jonathan Priest, M. D., of Toledo, and published monthly. The first number is to appear this month. With two journals in Columbus, besides those of Cincinnati, the profession of Ohio will have no excuse if they hide their light under a bushel.

Deaths from Snake-Bite in India.—Sir Joseph Tayrer, in the *British Medical Journal*, defends the system of offering rewards for the destruction of poisonous snakes in India. The number of deaths in 1875, in Bengal alone, from snake-bite, was 8,807. The number of cobras destroyed in that province during the same year, was 32,391.

Death from Chloroform.—In the *British Medical Journal*, of November 11, 1876, Mr. Walter, of Long Eaton, gives the particulars of the death of a boy eight years of age, while under the influence of chloroform, during an operation for straightening a deformed leg. The quantity of the anæsthetic used was between a drachm and a half and two drachms.

Medical Service in the Russian Army.—It is stated in the Russian *Medical Gazette*, that on the 1st of January, 1876, the Russian army possessed 2,102 surgeons, 6,887 assistant surgeons, 250 apothecaries, and 173 veterinary surgeons. This gives one surgeon for every 407 men, and one assistant surgeon for every 161 men.

New York Medical Journal Association.—The meetings of this Association are now held on the first and third Friday evening of each month, instead of weekly, as formerly.

The Medical Law of California.—The following is the text of the medical law, which takes effect the first day of the present month, entitled "An Act to regulate the Practice of Medicine in the State of California:"

SECTION 1. Every person practising medicine, in any of its departments, shall possess the qualifications required by this act. If a graduate in medicine, he shall present his diploma to the Board of Examiners herein named, for verification as to its genuineness. If the diploma is found genuine, and if the person named therein be the person claiming and presenting the same, the Board of Examiners shall issue its certificate to that effect, signed by all of the members thereof, and such diploma and certificate shall be conclusive as to the right of the lawful holder of the same to practise medicine in this State. If not a graduate, the person practising medicine in this State shall present himself before said Board, and submit himself to such examinations as the said Board shall require; and, if the examination be satisfactory to the examiners, the said Board shall issue its certificate in accordance with the facts, and the lawful holder of such certificate shall be entitled to all the rights and privileges herein mentioned.

SEC. 2. Each State Medical Society incorporated and in active existence on the tenth day of March, eighteen hundred and seventy-six, whose members are required to possess diplomas or license from some legally-chartered medical institution in good standing, shall appoint, annually, a Board of Examiners, consisting of seven members, who shall hold their offices for one year, and until their successors shall be chosen. The examiners so appointed shall go before a County Judge and make oath that they are regular graduates, or licentiates, and that they will faithfully perform the duties of their office. Vacancies occurring in a Board of Examiners shall be filled by the society appointing it, by the selection of alternates, or otherwise.

SEC. 3. The Board of Examiners shall organize within three months after the passage of this act. They shall procure a seal, and shall receive, through their Secretary, applications for certificates and examinations. The President of each Board shall have authority to administer oaths, and the Board take testimony in all matters relating to their duties. They shall issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally-chartered medical institutions in good standing. They shall prepare two forms of certificates, one for persons in possession of diplomas or licenses, the other for candidates examined by the Board. They shall furnish to the County Clerks of the several counties a list of all persons receiving certificates. In selecting places to hold their meetings, they shall, as far as is reasonable, accommodate applicants residing in different sections of the State, and due notice shall be published of all their meetings. Certificates shall be signed by all the members of the Board granting them, and shall indicate the medical society to which the Examining Board is attached.

Sec. 4. Said Board of Examiners shall examine diplomas as to their genuineness, and, if the diploma shall be found genuine as represented, the Secretary of the Board of Examiners shall receive a fee of one dollar from each graduate or licentiate, and no further charge shall be made to the applicants; but if it be found to be fraudulent, or not lawfully owned by the possessor, the Board shall be entitled to charge and collect twenty dollars of the applicant presenting such diploma. The verification of the diploma shall consist in the affidavit of the holder and applicant that he is the lawful possessor of the same, and that he is the person therein named. Such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of such officer, if he have a seal. Graduates may present their diplomas and affidavits, as provided in this act, by letter or by proxy, and the Board of Examiners shall issue its certificate the same as though the owner of the diploma was present.

Sec. 5. All examinations of persons not graduates or licentiates shall be made directly by the Board, and the certificates given by the Boards shall authorize the possessor to practise medicine and surgery in the State of California; but no examinations into the qualifications of persons not holding diplomas or licenses shall be made after the thirty-first day of December, eighteen hundred and seventy-six. After that date no certificates shall be granted by them, except to persons presenting diplomas or licenses from legally-chartered medical institutions in good standing.

Sec. 6. Every person holding a certificate from a Board of Examiners shall have it recorded in the office of the Clerk of the county in which he resides, and the record shall be indorsed thereon. Any person removing to another county to practise shall procure an indorsement to that effect on the certificate from the County Clerk, and shall record the certificate, in like manner, in the county to which he removes, and the holder of the certificate shall pay to the County Clerk the usual fees for making the record.

Sec. 7. The County Clerk shall keep, in a book provided for the purpose, a complete list of the certificates recorded by him, with the date of the issue and the name of the medical society represented by the Board of Examiners issuing them. If the certificate be based on a diploma or license, he shall record the name of the medical institution conferring it, and the date when conferred. The register of the County Clerk shall be open to public inspection during business-hours.

Sec. 8. Candidates for examination shall pay a fee of five dollars, in advance, which shall be returned to them if a certificate be refused. The fees received by the Board shall be paid into the treasury of the medical society by which the Board shall have been appointed, and the expenses and compensation of the Board shall be subject to arrangement with the society.

Sec. 9. Examinations may be in whole or in part in writing, and shall be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner.

Sec. 10. The Board of Examiners may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and they may revoke certificates for like causes. In all cases of refusal or revocation the applicant may appeal to the body appointing the Board.

Sec. 11. Any person shall be regarded as practising medicine, within the meaning of this act, who shall profess publicly to be a physician and to prescribe for the sick, or who shall append to his name the letters of "M. D." But nothing in this act shall be construed to prohibit students from prescribing under the supervision of preceptors, or to prohibit gratuitous services in cases of emergency. And this act shall not apply to commissioned surgeons of the United States Army and Navy.

Sec. 12. Any itinerant vender of any drug, nostrum, ointment, or appliance of any kind, intended for the treatment of disease or injury, [or] who shall, by writing or printing, or any other method, publicly profess to cure or treat diseases, injury, or deformity, by any drug, nostrum, manipulation, or other expedient, shall pay a license of one hundred dollars a month, to be collected in the usual way.

Sec. 13. Any person practising medicine or surgery in this State without complying with the provisions of this act, shall be punished by a fine of not less than fifty dollars ($50) nor more than five hundred dollars ($500), or by imprisonment in the county jail for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment, for each and every offense; and any person filing, or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and, upon conviction, shall be subject to such fine and imprisonment as are made and provided by the statutes of this State for the crime of forgery.

Sec. 14. This act shall take effect from and after its passage; but the penalties shall not be enforced till on and after the thirty-first day of December, eighteen hundred and seventy-six.

Army Intelligence.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 14 *to December* 13, 1876.

Magruder, D. L., Surgeon.—When relieved by Surgeon McKee, to proceed to St. Louis, Mo., and report, upon arrival, by letter to the Surgeon-General. S. O. 250, A. G. O., December 4, 1876.

McKee, J. C., Surgeon.—To report in person to the commanding officer, Department of Arizona, for duty as Medical Director of that Department. S. O. 250, C. S., A. G. O.

Gibson, J. R., Assistant Surgeon.—Assigned to duty as Chief Medical Officer of the Powder River Expedition. S. O. 156, Department of the Platte, November 16, 1876.

Williams, J. W., Assistant Surgeon.—Assigned to temporary duty with the United States troops at Washington Arsenal, D. C. S. O. 240, A. G. O., November 22, 1876.

McElderry, H., Assistant Surgeon.—Relieved from duty at Fortress Monroe, Va., and assigned to temporary duty with United States troops at Washington Arsenal, D. C. S. O. 242, A. G. O., November 24, 1876.

Lippincott, H., Assistant Surgeon.—Ordered before Army Medical Board, New York City, for examination for promotion, and upon completion thereof rejoin his station, West Point, N. Y. S. O. 250, C. S., A. G. O.

Patzki, J. H., Assistant Surgeon.—To report to the commanding officer, Fort D. A. Russell, Wy. T., for duty. S. O. 154, Department of the Platte, November 14, 1876.

Dickson, J. M., Assistant Surgeon.—Assigned to duty with Sixteenth Infantry in New Orleans, La. S. O. 224, Department of the Gulf, November 18, 1876.

Hoff, J. V. R., Assistant Surgeon.—Assigned to duty as Post-Surgeon at Fort Fetterman, Wy. T., relieving Assistant-Surgeon Gibson. S. O. 156, C. S., Department of the Platte.

Comegys, E. T., Assistant Surgeon.—Assigned to temporary duty at Fort Clark, Texas. S. O. 216, Department of Texas, November 28, 1876.

Barnett, R., Assistant Surgeon.—Assigned to duty with battalion of Third and Thirteenth Infantry in New Orleans, La. S. O. 224, C. S., Department of the Gulf.

Taylor, M. E., Assistant Surgeon.—Assigned to duty with Third and Thirteenth Infantry, New Orleans, La. S. O. 224, C. S., Department of the Gulf.

Laub, C. H., Lieutenant-Colonel and Assistant Medical Purveyor.—Died at the Soldiers' Home, near Washington, D. C., on December 2, 1876.

Rose, George S., Assistant Surgeon.—Died at Madison Barracks, Sackett's Harbor, N. Y., on November 20, 1876.

Obituary.

Lady Bell, widow of the late Sir Charles Bell, died recently, in her ninetieth year. She was a woman of great intellectual activity, and as late as 1874 edited a new edition of her husband's treatise on "The Hand."

Dr. Burdach, Professor of Anatomy at Königsberg, died recently. He was the author of several works, the most important being that on "The Structure of the Nerves."

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Original Communications.

ART. I.—*On the Differential Indications for the Use of the Faradic and Galvanic Currents.*[1] By A. D. ROCKWELL, M. D., of New York.

THE differential indications for the use of the faradic and galvanic currents is one of the most interesting and important themes for consideration in the department of medical electricity; and I undertake its discussion the more readily, since the accumulated investigations and experiences of the past decade have wrested many things that are important from the domain of speculation, and clearly established their bearings and relations. The *relative* value of the two currents resolves itself mainly into a question of experience. Both are valuable aids in the treatment of various diseases, both are frequently serviceable in the treatment of the same disease, while in certain conditions the faradic current is alone indicated, and in others the galvanic. One, with a certain line of experience, finds that his best results have been through the use of faradism; while another, with a different class of cases, finds that galvanism is best adapted to his use.

This idea finds its illustration in a number of articles that have appeared during the past year or so, regarding the relation of electricity to pain. The well-known power of the galvanic current to relieve many forms of pain is repeatedly emphasized, while the efficacy of the faradic current in the same direction is seldom referred to; hence the inference very naturally is that the latter, for this purpose, is of but little value.

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[1] Read before the New York Medical Journal Association, November, 1876.

The truth is, that faradism is not only invaluable in many forms of pain, as will be indicated further on, but in certain conditions relieves, where galvanism is not only useless, but worse than useless, since it serves only to exaggerate the existing distress. The simple question of the value of one current, as compared to the other, is therefore worthy of but little consideration; being simply two manifestations of one force, they have each their functions, both as independent and supplemental agents.

The differential indications for the use of faradism and galvanism may, on the contrary, well demand the closest scrutiny, for on the accuracy with which we estimate these indications will largely depend the success of our efforts. If we do not clearly appreciate the difference in action, and adaptation to symptoms, of the currents, we either fail to obtain results that are obtainable, or valuable time is lost in the change of treatment.

An intelligent and satisfactory estimate of this point demands both a knowledge of the physical and physiological distinctions of the currents, and an experience that has not only been sufficiently extensive and varied, but that has been carefully and systematically formulated. In regard to the first (the physical and physiological distinctions of the currents) it has been so repeatedly treated of from time to time in medical journals, and is so thoroughly discussed in special treatises which are readily obtainable, that I shall not enter upon their consideration in detail, but shall rather attempt some practical observations drawn from personal experience.

The known physical and physiological distinctions of the two currents do indeed afford sufficient data to enable us at times to differentiate with accuracy in the selection of the currents, and the application of certain methods.

For example: the faradic current, by virtue probably of its greater mechanical effects, is powerfully tonic in its action, and by the method of general faradization is indicated in many cases of nervous exhaustion, and by localized faradization in the mal-nutrition and atrophy of muscles.

The galvanic current, by virtue of its greater power of overcoming resistance, is indicated when we wish to act upon the central nervous system, and, through its superiority in exciting nerve-irritability, we use it to produce contractions in paralyzed muscles that fail to respond to the faradic. So far forth, then, our knowledge of electro-physics and physiology can prove directly serviceable in the adaptation of the proper treatment, but none the less must we to a very considerable extent rely upon the aid afforded by repeated clinical observation. In a practical review of the subject at hand, it seems natural to consider—1. Those diseases, or symptoms of disease, which seem to demand the faradic current; 2. Those that call for the galvanic; and, 3. Those in which both are frequently and interchangeably indicated.

1. Concerning those diseases that seem to demand the faradic current alone, there is but little to be said. There are in various generic diseases, if I may so speak, specific symptoms that invariably demand one or the other of the two currents, and even special qualities of current—and to this point allusion will presently be made; but there are few distinct organic or functional conditions that in every phase of their manifestation demand alone and always any special form of electricity.

Asthenopia, a symptom depending on an absolute or relative deficiency of energy in the muscles of accommodation or of the internal recti, and accompanied by hyperæsthesia of the retina and of the ciliary nerves, is about the only distinct disease that seems to demand the faradic current alone. I will not say that galvanism is never serviceable; but my experience, at least, seems to teach that the instances where faradism is not immeasurably superior to galvanism are so exceptional as practically to exclude the latter from consideration.

2. In regard to the exclusive use of galvanism, there is also but little to be said, although it certainly has a somewhat

wider range. I would designate spinal irritation, certain sequelæ of cerebro-spinal meningitis, and most of those skin-affections in which electricity has been shown to be of service, as the distinct diseases in which the galvanic is uniformly superior to the faradic.

3. Those diseases in which either current may prove equally efficacious, or where at one stage of the symptoms the galvanic, and later, the faradic current is indicated.

Paralysis may be said to be the disease for which electricity is *par excellence* the remedy, and yet, as is well known, it is frequently of very little use where the symptoms arise from certain organic conditions, but may be absolutely contra-indicated. In hemiplegia, where there exists, as is so often the case, an exalted electro-muscular contractility, electricity, if used at all, should be used in the form of faradization, and with an exceedingly mild and rapidly interrupted current.

Under this treatment, improvement in the symptoms is not unfrequently accelerated, the paralyzed member becoming stronger, and the muscular contractions less readily produced; and, even when muscular contractions are *somewhat less* readily called out than in the normal condition, the same current is as a rule preferable.

But when, on the contrary, there is a very great diminution, and even, relatively to the faradic current, a complete loss of electro-muscular contractility, the galvanic current is always indicated, the faradic coming into play only when the muscles give evidence of considerable reaction to its influence. In paraplegia, whether depending upon an absolute structural change in the cord, or upon causes that result in simple anæmia or hyperæmia, we generally find, after a short time, complete or approximate loss of farado-muscular contractility. The galvanic current is alone applicable in these cases, for the specific purpose of restoring nerve-excitability, although the faradic is useful in attempts to improve the impaired nutrition of the paralyzed members.

The difference in the reaction of the two currents is typically illustrated in facial paralysis, and especially when it results from the action of cold (*rheumatismal*) or compression.

In these cases the faradic current does not cause contractions, while not only do the muscles respond to the galvanic, but a much weaker current will answer than when the parts are normal.

As the patient improves, it takes an increased tension of galvanism to cause the same effects, until finally farado-muscular contractility becomes manifest. This phenomenon has been observed also in traumatic paralysis of the peroneal nerve, and in a case of rheumatismal paralysis of the circumflex nerve. The above as a clinical fact is thoroughly substantiated, but it is interesting to note how it is reënforced by electro-physiological experiment.

Erb, and after him Ziemssen and Weiss, found that, after the laceration or division of the sciatic nerve in a rabbit, the excitability of the muscles through the first week became diminished for both currents; but subsequently, while farado-muscular contractility became more and more feeble, galvano-muscular contractility rapidly increased, until two cells caused contractions. The following is in brief the explanation offered by Onimus for these differences in the action of the two currents:

The *duration* of a current is *the* important factor in the production of muscular contractions. The closing of an induced or faradic current is only 0.0114″ in duration, while that of the galvanic is $\frac{1}{20}$ of a second, hence the faradic more readily excites the healthy nerves and muscles; but, when these are diseased, a longer action is necessary, hence the galvanic is most potent. It is claimed that the faradic current does not *directly* cause contraction of a muscle, but *indirectly* through the intra-muscular nerves; the galvanic current, on the other hand, has a feeble action on intra-muscular nerves, but exerts a powerful action on idio-muscular contraction. The probability that, in facial paralysis of rheumatismal origin (the cold acting on the periphery), the intra-muscular nerves are attacked from the beginning, accounts for the rapid loss of farado-muscular contractility, while the absence of profound alteration of the muscular fibres, over which the galvanic current has such a ready action, accounts for the retention of galvano-muscular contractility.

In the essential paralysis of childhood, the farado-muscular contractility is generally diminished, and often abolished, while occasionally the galvanic current, as in facial paralysis from cold, produces contractions more readily than in health. If the muscles respond in any marked degree to faradization, it should be used; if not, galvanism is indicated.

The relief of pain, whether of a pseudo-neuralgic or hysterical character, or whether dependent on true neuralgia or other causes, is a very important function of electrization; but in no condition has it been more difficult to discriminate correctly in the selection of the proper method of electrical treatment. True neuralgia, as defined by Anstie, is without doubt most successfully treated by galvanism, while hysterical neuralgia, and the so-called pseudo-neuralgia, which are simply forms of pain, occupying certain areas, and running seemingly in the direction of certain nerves, yield most readily to faradism.

More specifically, the effects of *pressure* in the various forms of neuralgia are exceedingly useful, as guiding symptoms, indicating the proper current. I do not by any means lay it down as a universal law, but it will certainly be found that, in the great majority of cases of neuralgia, where firm pressure over the affected nerves aggravates the pain, the galvanic current is indicated, while the faradic current has the greater power to relieve when such pressure does not cause an increase of pain.

In the class of cases called sometimes hysterical hyperæsthesia, it is well known that firm and prolonged pressure affords marked relief, while pressure superficially applied increases the distress. The faradic current is here infinitely superior to the galvanic. In the treatment of the pain of herpes zoster, galvanism is invaluable. In many cases that have fallen under my observation, I have never known it to fail to afford either complete or approximate relief. The effects of galvanism on the extreme suffering that so often accompanies mammary cancer are often little short of magical. I have in many instances seen the acutest agony relieved instantly, and, while this relief is necessarily seldom if ever permanent, it is possible in many cases, by repeated applications, to keep the pain in abeyance for months, and thus the necessity of constantly administering opium is in a measure obviated. For the relief of neither of the last-named diseases have I found faradization to be of essential service.

As we advance to the consideration of those other forms of disease which experience has shown to be more or less amenable to electrical treatment, it will be found to be more difficult, without submitting the patient to preliminary and tentative applications, to discriminate between the currents best adapted to the case in hand, but I venture to assert that in cases of chorea, of amenorrhœa associated with anæmia and debility, and in cases of nervous exhaustion in general, we cannot often err if we resort to the faradic current by the method of general faradization, either independently or as an adjunct to other treatment.

I once heard a very worthy preacher say that a life-long unbeliever, who happened casually to attend his ministrations, heard him allude briefly but earnestly to the central idea and foundation principle of the faith to which he held and which he advocated. The man was persuaded, and ever after, on all suitable occasions—be the theme of his discourse what it might—the preacher never failed, either directly or incidentally to refer to this central thought, in the hope of impressing its truth on others.

In like manner, I beg to be allowed to allude briefly to this subject of general faradization as a constitutional tonic, not only because I believe it to be the central idea of electro-therapeutics, and to have a wider range of usefulness than any other one method of application, but because without such allusion the treatment of my subject would be very incomplete. It is now nearly ten years since the power of electricity as a tonic was first advanced, and supported by theoretical considerations and clinical illustrations.

Because, perhaps, of its novelty alone, this theory excited at first not a little attention both at home and abroad, but was subsequently quite neglected, so far as concerns any adequate allusion to it, by those who have prominently written and lectured. The evidences, however, of carefully elaborated individual experiences have greatly multiplied during the past decade, and furnished abundant proof of the correctness of this theory, but unfortunately very few have undertaken to write upon the subject, and these individual experiences, so rich in results and so important as evidences, are practically lost.

Electricity, more than any other therapeutic means, draws to it the folly, ignorance, and cupidity of the land, but all of success that has been achieved by these charlatans has been by some stereotyped application of this method, ignorantly directed; of the evil that has followed the efforts of these "blind leaders of the blind," no man knoweth. I would, therefore, most earnestly urge those who are especially interested in this department to carefully study the *modus operandi*—the *rationale* and effects of general faradization, with the full assurance that a practical and patient application of the principles involved will not only amply reward all expenditure of time and labor, but will be instrumental in at least narrowing the field where greed and ignorance prey upon the suffering and credulity of mankind.

Art. II.—*On the Principles of Antipyretic Action.* By Thomas J. Mays, M. D., Upper Lehigh, Pa.

To our discredit can it be said that the science of therapeutics is less advanced and really less valued than any other branch of modern medicine. Indeed, were we to know the truth, we should find that but very little of our every-day application of medicines could be entitled scientific therapeutics. This may sound strange, and seem to be at variance with the facts, yet how many of us are too prone to introduce medicines into the human system, of the action of which we have not the most remote idea, in order to relieve some fanciful disorder of which we know still less, perhaps—the results of which, if reasoned out to their legitimate consequences and held before our eyes in their true light, would exhibit the most inconsistent and contradictory array of facts. Indeed, if we were guilty of similar behavior in any other sphere of life, it would be universally condemned and denounced as unworthy of an intelligent and advancing civilization

For example, we may mention the prevailing presumption that certain diseases are of a sthenic character, and that we must needs employ the most violent and depressant measures, such as bleeding, blistering, catharsis, etc., in order to subdue these raging disorders; happily, however, these erroneous and ill-founded ideas are vanishing and becoming more obsolete every day. But who, even at the present time, does not know among his acquaintances the medical man who practises venesection for the purpose of relieving the blood-vessels of an inflamed lung and thus allowing them to contract, while at the same time he administers tartar-emetic to relax them; or who commits some equally absurd and incongruous blunders? Such instances are of frequent occurrence, and are sad evidences that our ideas concerning the action of remedies and of disease are far from having a fixed and rational basis. Then, too, there exists the belief that our theories of therapeutics and disease are a myth, and answer well enough for idle argumentation and quibbling purposes, but, when the time arrives for putting them into practical application, they afford as little support as a broken staff; and as for bringing these two departments of medicine into anything like theoretic and scientific relations it is impossible and out of the question.

Every other phenomenon in Nature conforms with some immutable and unswerving law; and, since therapeutics forms or is a part of a natural process, it necessarily follows that it likewise must have its uniform laws and principles by which *it* is governed. We do not claim that it can be made anything like an exact science in the present condition of things, since our knowledge of the sciences or branches of medicine which are subservient to it and on which it solely depends is not precise itself; but we believe that there are certain fixed principles which control the action of our remedies, and that it is our duty to trace them out. The science of agriculture depends upon a knowledge of chemistry, geology, physics, meteorology, and astronomy; but our knowledge of these sciences is deficient and unreliable in a great many particulars—hence agriculture cannot as yet become as exact a science as that of mathematics: yet this does not prove that there can be no science of agriculture. And again it is evident to every one that there is a marked difference in the ultimate value of the products of the scientific farmer and those of the farmer who is ignorant, or does not take proper cognizance of the laws which control the seed he sows and the soil he tills, and who necessarily accomplishes his work in a sort of hap-hazard style. So it is with therapeutics. It also depends upon a correct knowledge of physiology, pathology, chemistry, physics, botany, anatomy, meteorology, etc., and will become more precise in proportion as our knowledge of these various departments of Nature increases. The practitioner who is not guided by principles in the selection of his remedies in the treatment of disease, is like a ship at sea without a rudder, driven about by and at the mercy of every wave. Not only, however, is this professedly done, but very often those who form therapeutic hypotheses are cried down as mere theorists, whereas the truth is, in medicine as in every other art and science, that every well-regulated process must be preceded and anticipated by some well-constructed theory, and that the success of practical and rational therapeutics bears an exact and constant relation to theoretical therapeutics. Even the most devoted advocates of empiricism, or the so-called practical men of our day, are constantly, though perhaps unconsciously, forming theories, unimportant and fallacious as they may be, which guide them in the administration of their remedial measures. The crudest empiric among them gives "salts" to deplete and cool the blood; applies cold to a fresh wound because it prevents undue heat and inflammation; and administers stimulants in cases of extreme prostration and debility in order to revivify the exhausted system.

But it is not sufficient for us to have a knowledge only that cold prevents undue heat and inflammation in the case of a fresh wound, but it is highly essential to our success as rational practitioners to know *how* and *why* cold thus acts, so that we can apply its principle of action to other conditions which may likewise be adapted to its use. For instance, we may deduce the following conclusions from theoretical grounds alone: If cold prevents or reduces high heat of the body in the case of a wound, then fever, which is accompanied by an excessive temperature, will probably, in a like manner, be benefited by its application; and experience can well testify to the efficaciousness of the cold-water treatment in fever. And we are fully convinced that other remedies, in their action on the animal economy, are also governed, not by fickleness and caprice of the most inconstant kind—a belief to which we so often give credence in our practice—but by the most lasting and enduring principles; hence we have humbly taken upon ourselves the task of pointing out, to the best of our ability, certain principles which underlie the action of some of our most important antipyretic remedies.

The animal body is a "moving equilibrium," whose equilibrium and motion vary at different times even in health. It starts out in infancy with an equilibrium of an unstable character, easily overthrown, until it arrives at the stage of manhood, or the point of its highest development, when it possesses an equilibrium of the most stable kind, and, as it advances toward old age and decrepitude, it reëxchanges the stable for an unstable equilibrium. Its course may be compared to that of a top, which, when it begins to spin, is not in that balanced state that it assumes when it arrives at the point where it finds almost a complete adjustment between itself and its surroundings, and which is overcome again after its inherent force, given to it by the hand, is expended. Each unit or molecule of the body is likewise in a "moving equilibrium," and pursues a similar course. While it is essential to health that the body, as a whole, maintain an equilibrium in relation to its surroundings, it is also necessary that each unit of the body sustain its equilibrium in relation to other units; and in truth this is a part of the process of the "continuous adjustment of internal to external relations," which Herbert Spencer so ably defines as the phenomena of life. It is also necessary that the units or molecules of the body, in order to maintain their normal equilibrium, must be in a constant state of motion, since it is a law of Nature that the units or molecules of all bodies, whether organic or inorganic, be in a constant state of motion or oscillation; for the different degrees of molecular motion is the only distinguishing feature between solid, fluid, and gaseous substances. Now, it is further necessary that these molecules not only be endowed with motion or oscillation, but that they must perform their oscillations at certain relative distances, which are compatible with the normal consistency of the tissues, of which they form an elementary part. For, since it is the inevitable tendency of all bodies, if left alone, that the force of attraction overcomes that of repulsion, and thus assumes the solid form, it is evident that the living body, in order to maintain its moving equilibrium, must have two indications fulfilled: 1. That the body must receive material to build up or replace these units or organic molecules; and, 2. That it must be supplied with force to retain these molecules in motion, and thereby overcome their inherent force of attraction. The first of these indications is provided by the process of nutrition, and the second by that of oxidation, to which we shall allude again further on. Health, then, consists in oscillations or motion of these units or molecules within certain prescribed limits; but, if these oscillations either remain below this limit, or pass beyond these boundaries, then disease follows; as, for example, the primary effect of severe cold depresses the molecular motion of the body below the line of the normal; while inflammation and fever are examples of the class of diseases which supersede the line of the normal.

Thus, while a certain degree of molecular motion of the body gives rise to that phenomenon which we call health, there is the same tendency to molecular rest as we see is the case in the spinning top after it has dissipated all the force or motion which was given to it by the hand; and we have indicated above that this tendency to rest is counteracted by the supply of matter and force from the outside, through the instrumentality of the processes of nutrition and oxidation. These two processes, which are mainly involved in fever, are so closely associated in their operations that they require a brief description.

Nutrition is a process of integration, while oxidation is one of disintegration, yet the latter is as essential to life and health as the former. It is the function of nutrition to select material from the food, which is serviceable in building up the body; while it is the function of oxidation to tear down the tissues and fit them to be transported out of the body. But it is not merely the building up and breaking down of tissue which is going on in health, for a certain portion of the food does not necessarily become or form a part of tissue, but is especially intended and serves for nothing else but for the purpose of oxidation. Thus, while the nitrogenous food is destined to become organized principally into tissue, the non-nitrogenous food is chiefly destined to serve for force-production in the shape of muscular, nervous, and other work. The animal body may, therefore, be compared to a steam-engine, the nitrogenous tissues representing the iron and framework, while the non-nitrogenous food represents the fuel—with this difference, that the animal machine repairs itself and the steam-engine does not. This is not strictly true, for nitrogenous food may and does become oxidized, but it is highly probable that the hydrocarbon elements, which form a portion of their constituency, chiefly serve for this purpose alone.

In health, then, all the force which is expended principally emanates from the oxidization of the hydrocarbon and carbohydrate elements of the food, while in fever a new factor, of an albuminous nature, is introduced, which greatly accelerates the chemical action of the body. That a disturbance of the chemical equilibrium must follow the introduction of an albuminous poison into the body might have been inferred from the fact that all nitrogenous substances are especially noted for their exceeding great chemical activity and instability. All substances, whether of the inorganic or organic kind, which are endowed with great chemical activity, contain the nitrogen element: for example, all explosive substances, such as nitroglycerine, gunpowder, etc., all ferments, as yeast, the vinegar-plant, etc., hydrocyanic acid, etc., contain the nitrogen element. Hence, all the albuminous or nitrogenous tissues, as muscles, nerves, blood-globules, etc., are prone to undergo chemical changes, and to deteriorate on account of the most trifling cause; and when an albuminous poison, which is equally or more unstable, is introduced, and comes in contact with these tissues, the most violent chemical or zymotic action ensues. The amount of urea-discharge is increased to an enormous quantity, and this fact alone is sufficient evidence to show that the albuminous tissues are chiefly implicated in the chemical metamorphosis of fever; thus the natural order of things is reversed: in health the non-nitrogenous, while in fever the nitrogenous substances mainly serve for the purpose of oxidation.

Another reason for the almost exclusive oxidation of the nitrogenous tissues in fever, aside from their proneness to decompose, is the fact that the fever-poison itself destroys the utility of the organs of digestion and assimilation, which very materially interferes with the introduction of ordinary food into the body; hence the certain degree of starvation which is invariably present in fever, and the great care and discrimination which are necessary in the selection of foods; always keeping in view the fact that the force and matter of the body are rapidly wasting away, and that the pressing indication is to supply this waste in the most nutritive and assimilable form; but this part of the subject will receive further attention when we come to discuss the antipyretic action of alcohol.

Fever, then, is characterized by great heat, waste of tissue, and loss of force—the result of an impoverished process of nutrition and accelerated oxidation. But this is not all, for the excessive heat which is generated by the process of oxidation is not only an indication that a rapid tissue-metamorphosis is taking place, but that this high heat itself facilitates the chemical changes of other units or molecules of the body: so the leading indication in the treatment of fever is to reduce the temperature, and thus to restore the processes of nutrition and oxidation to a more normal equilibrium; and cold is the most efficient agent at our command by which this end can be secured.

Cold.—Heat and cold are two relative terms which define certain conditions of molecular motion. They are two aspects of the same phenomenon, for, when we receive the impression of a certain degree of molecular motion, we call it heat, and, when the molecular motion is of a different and lower degree, we denominate it cold; so both heat and cold have no material existence as such, but are mere states of molecular oscillation. This has been admirably demonstrated by Prof. Tyndall, in his work on "Heat as a Mode of Motion," and is an accepted fact among scientific men of the present day, so that further comment as to the nature of heat is unnecessary.

A heated body, then, is one which contains a greater, and a cold body one which contains a smaller degree of motion among its molecules, and this constitutes their only difference. If boiling water is brought in contact with a cold atmosphere, the former imparts its motion—which we call heat—to the latter, until a state of equilibrium is restored between the two bodies. This we term radiation, but it is nothing else than the escape of motion from a body which possessed molecular motion of a higher degree or tension to another body which contains molecular motion of a lower degree. This follows from the fundamental law of Nature that motion takes place in the direction which offers the least resistance or the greatest traction, or a resultant of the two. The direction of motion, in the case of the boiling water distributing its motion to the cold atmosphere, is clearly one of least resistance; for the molecules of boiling water are steadily pressing and impinging on each other, and are in a constant state of the most violent agitation, colliding with each other at every instant and on every side; and, when this seething mass of molecules is exposed to a medium whose molecules possess a smaller degree of motion, and so offer more space, less pressure, and less resistance than they do to themselves, it is very manifest that the direction of motion will take place from the water to its environment, or in the line of least resistance.

Physiological Action of Cold.—When the animal body is exposed to cold, a sudden loss of heat by radiation takes place; but this is not the only influence which cold exercises on organic Nature, for it also retards the process of chemical change, and, if the cold is sufficiently intense, a complete cessation of these chemical changes follows. This principle of the action of cold is carried out practically by every housewife who places her meat and vegetables on ice to prevent a too rapid decomposition. That cold suspends all chemical action is well illustrated in the Siberian mammoth, which was buried for ages under ice and snow, and was in such a state of preservation that the wild animals devoured its flesh as if it were fresh, after it became exhumed.

Various experimenters have arrived at various and directly opposite conclusions concerning the physiological action of cold on the human body. Thus, we quote from Wood's "Treatise on Therapeutics" (second edition, p. 614) that, "Weisflog" (*Deutsches Archiv für klin. Med.*, Bd. xi., p. 570) "has found that the local abstraction of heat by a cold sitz-bath causes a rise in the temperature of the axilla, and that, in fever-patients, unless the sitz-bath is prolonged over twenty minutes, no fall of the bodily temperature results. In 1860 Kernig found that a healthy man, in a bath of the temperature of 28° to 30° C., produces about twice as much heat as normal; in the baths of 24°, about three times as much; and in baths of 20° C., about four times as much. Liebermeister found that, in a healthy man, exposure to cold for a brief period of time caused a rise in the bodily temperature, and, on extending his researches into fever, proved that where the external cooling was not too powerful, or too long continued, the same was true of fever-patients. From this it follows that the use of external cold stimulates heat-production. . . . This would appear to prove that cold baths increase the production of animal heat. It seems most probable that this is the case; but A. Murri believes that he has proved that the cold baths have no such influence. At any rate, investigations of Liebermeister and others have shown that the first rise of temperature, produced alike in healthy and in fever subjects by exposure to a moderate and not too long-continued cold, is followed, after removal of the cold, by a fall of bodily temperature of greater or less degree. While, therefore, external cold probably first stimulates, it afterward depresses the production of animal heat. The further experiments of Liebermeister upon the elimination of carbonic acid are also in accord with his temperature-study, for he found that, after the bath, the elimination sank below normal, and continued so for some considerable time."

Now, the contradictory conclusions at which these different observers have arrived can be satisfactorily reconciled with the principles to which we alluded above, viz., that the direction of motion takes place in the line of least resistance, and that action and reaction are equal. If two opposite and equal forces meet, evidently no motion can result in either direction; but if a weak force encounters from an opposite direction a stronger force, then motion must result in the direction of the weaker force. For example, if the animal body meets an environment with a temperature equal to its own, no heat radiates, no motion results in either direction, for the forces balance each other; but if the body comes in contact with an environment, the temperature of which is far below its own, then its temperature becomes reduced and its chemical changes checked in proportion to the extent of the depression; or, in other words, the body loses its molecular motion or heat in the line of least resistance. But, when a force acts on the body, a corresponding reaction takes place in it, for action and reaction are always equal: so, when the temperature of the body is depressed by a cold bath, reaction comes on in the shape of a subsequent elevation of its temperature, which is again followed by a depression; and this oscillation continues in a zigzag form, diminishing at every step, for it dissipates its own momentum, until equilibrium of the bodily temperature is again restored. The degree of oscillation depends altogether upon the relative strength and persistence of action of the two forces engaged in the combat. For example, if a fevered and a healthy body are subjected for a certain time to a certain degree of cold, the temperature of the former becomes further depressed than the temperature of the latter, merely because the resisting force is stronger in a healthy than it is in a fevered subject. The reaction of the body from the effects of cold is well exemplified in frost-bite, where the primary effects of cold suspend almost entirely the processes of nutrition and oxidation, until the force of the cold is expended, when reaction sets in. But the wave of reaction does not stop at the normal boundary-line whence the depression took place, but it passes far beyond this and establishes itself in the process of inflammation—a phenomenon of accelerated nutrition and oxidation.

So, then, the application of cold to the body invariably results in a direct depression of its temperature, which is followed by a subsequent elevation—the effect, altogether proportionate to the intensity of the depressing cause; hence different results are obtained by noting the temperature during the stage of depression or during the stage of reaction, and in these facts the above-quoted contradictory conclusions will receive a consistent explanation.

Therapeutic Action of Cold.—The leading therapeutic indication in the treatment of fever is to reduce the elevated temperature, and to check the excessive chemical changes of the body. When considering the physiological action of cold, we found that it possessed the power to fulfill these indications in an eminent degree. In the therapeutical application of cold we must not forget the relative strength of the two forces which we desire to bring into antagonism with each other; for, though the body may be in a state of high fever, yet that does not necessarily indicate that a proportionately low temperature is required to subdue it, since high heat of the body and bodily strength are not synonymous; hence it follows that a fevered body, though containing more actual heat, has less endurance and resistance than the normal body. The chief aim, then, in treating pyrexia is to reduce the temperature, and the degree of cold should be constantly varied to effect this desired end. Brandt recommended a bath of 68° Fahr., which will serve for all ordinary purposes; but it must not be forgotten that the length of time during which the patient is exposed to a cold bath has also an important influence in bringing about a lowered condition of temperature. And since fever commits such fearful ravages on the human system, as is shown by Liebermeister, Burdon-Sanderson, and others, who found that the muscles, liver, spleen, kidneys, nerves, blood-vessels, and blood-globules, undergo morbid changes in persistent fever, it is not alone sufficient to subdue abnormal heat of the body, but it is also necessary to prevent its recurrence; therefore an early and continuous application of cold becomes necessary. The different modes of applying cold water successfully to the human body are, sponging, packing, affusion, and baths.

Quinine.—Quinine was formerly supposed to act exclusively through the medium of the nervous system, but recent experiments totally refute that idea of its action. Ever since its discovery it has been in vogue as an antipyretic agent, and no other article of the materia medica has secured a greater number of therapeutic titles from time to time than this one substance. This, we think, can be attributed to the different effects of quinine on the structures of the body, for these manifest themselves in various phases, according to the conditions present; but then we must not lose sight of its general *modus operandi*, for without a knowledge of this its action cannot be intelligently understood. And, as this paper is only designed to deal with the general principles of the action of certain antipyretic remedies, we shall discuss the action of quinine in that light. In order to do this in the most efficient manner, we shall first notice its physiological action; then glance at its mode of action in the various diseases in which experience or empiricism sanctions its use; and, lastly, endeavor to deduce a rational explanation or theory which will combine the largest number of observed facts into one chain or principle of action.

Physiological Action of Quinine.—First, then, as to its physiological action: It has been known for a very long time that quinine has the power of preserving milk, flesh, urine, etc.; of preventing putrefaction, and of checking alcoholic fermentation, and of exerting a poisonous and fatal influence on all kinds of infusorial life. And the researches of Drs. Binz, Martin, and Kerner, demonstrate that the action of quinine limits the pathological multiplication of the colorless blood-globules, and impairs their activity and migratory movements. These experiments evidently tend to show that quinine prevents or retards chemical and nutritive changes; for both putrefaction and fermentation are processes of chemical metamorphosis; and it is now a well-established fact that the white blood-cells occupy a very inferior position in the scale of development, bear a very close relationship to primitive organisms, and are generated by a process of nutrition which is less specialized and less complex than that which produces the red corpuscles. This follows from the law of dissolution of organic matter. Evolution implies a process of development from the homogeneous to the heterogeneous, from the less to the more specialized, while dissolution implies a reverse process—a transition from the heterogeneous to the homogeneous, from the more to the less specialized. The latter process is very well exemplified in inflammation. In this morbid phenomenon—which is the result of increased or abnormal chemical and nutritive changes—white blood-cells appear in large numbers, the result of broken-down and disintegrated tissue. In this degenerative process, there is a decided transit from the more highly-specialized units of bodily tissue down to the unspecialized corpuscles of pus, which do not exhibit any higher vital motion than that of the amœbæ. This tendency to dissolution is manifested by all organic tissues whenever their molecular motion from any cause is intensified, for Dr. Frey, in his "Histo-Chemistry of Man" (page 110), says: "If a living blood-cell be warmed up to about 52° C., a wonderful change comes over it; it becomes rapidly marked by a varying number of deep indentations; shortly after this the formation of a series of bud-like processes takes place, which either separate at once, or remain for a time in connection with the rest of the cell-body by means of slender filiform styles."

Now, in the above facts we find an obvious explanation of the fact that quinine has a more decided influence over the lower forms of life than it has on the higher; more on the body in disease than it has in health; for it follows from the law to which we alluded when speaking of the antipyretic action of cold, viz., that, if two forces meet, motion takes place in the direction of least resistance. It is evident that low, unspecialized units have less power of resistance than the higher forms; that the body in health has greater power to react than it has when prostrated by disease; hence a quantity of quinine which affects the system in disease will have hardly any appreciable influence in health.

Therapeutic Action of Quinine.—Thus, then, from these theoretical considerations we should be led to conclude that quinine is applicable to all those pathological conditions in which is found excessive nutritive and chemical metamorphosis, and, if this is the true view of its *modus operandi*, we should also expect to find that, in its practical use, it is capable of yielding the best results in such morbid states; and, if such is the case, its therapeutic action becomes more intelligible, for the best test of the action of any remedy is that theory and practice shall confirm each other; and on inquiry we shall find that this theoretic view of the action of quinine is fully verified by evidence derived from the field of experience. Thus, in the different varieties of inflammation it has proved itself an invaluable medicine, and this phenomenon has already been described as the result of increased nutritive and chemical activity. In traumatic fever, septicæmia, pyæmia, and puerperal fever—different phases of the same disease which arises from infection—quinine is one of the most efficacious medicines employed. This pathological condition is caused by the introduction of pus or some other infective material into the body, followed by all the pathognomonic symptoms of pyrexia, high temperature, and a waste of the tissues and forces of the body. In the treatment of intermittent, typhus, typhoid, and relapsing fevers, it is hardly necessary to say that quinine is one of our chief remedies.

So much, then, for this hypothesis of the therapeutic action of quinine as corroborated by evidence gathered from the field of experience; but if this be the true and correct view of its *modus operandi*, then we should also expect to find its use indicated in "thermic fever," or "sunstroke," for this is preeminently a disease in which a superheated condition of the body forms the leading symptom. Here the temperature in a very short time rises to a pitch which is inconsistent with vital action; and since we noticed that all organic substances are very much prone to disintegrate in an elevated temperature, in this disease, where the pyrexia sometimes rises to 110° Fahr. in a very few hours, the waste and structural deterioration must take place at a frightful rapidity. However, for some reason or other, probably on account of the difficulty which is encountered in the administration of medicines by the mouth, quinine in this disease has not (at least not to our knowledge) been employed in its treatment until within the last few years, but the results show that it is attended by the most marked and encouraging success, especially if administered by the hypodermic method. In the March (1876) number of the *Practitioner* (London), appears a paper, "On the Treatment of Sunstroke by the Subcutaneous Injection of Quinine," from the pen of Surgeon-Major Hall, of the English Army Medical Department, in which he says that "the experience of several medical officers in India is now apparently sufficient to prove that the hypodermic injection of quinine in heat-apoplexy is the most successful method of treatment that has yet been adopted. I have had conversations with several who have used it; and a friend of mine, a surgeon-major, recently returned home, said to me, 'If there is anything in the practice of medicine which may be described as *magical*, it is the effect of the subcutaneous injection of quinine in sunstroke.'" Dr. Hall then describes a case of sunstroke, the patient being a young, healthy soldier, as follows: "The train was about to start, when he (the patient) staggered up to the carriage set apart for the sick, and asked for admission, saying he was dying. . . . The cold douche was assiduously employed, ice was applied at the nape, and friction of the limbs kept up. Though the temperature of the surface was brought to its natural standard, the patient was making no rally, and the heart's action was rapidly failing. Stimulants could with much difficulty be administered, as the jaws were firmly closed, and complete insensibility was almost established; in short, the case was becoming desperate.

"Quinine had been recently recommended in cases of this nature, and, as a syringe was at hand, it was determined to introduce the drug subcutaneously. The effect was closely watched, and after the first injection the pulse at the wrist was felt to flicker; this encouraged a further trial, and the result was so satisfactory that a third injection was accomplished. Within a few minutes the circulation was fully established, the man sat up, stared vacantly about, and recognized those standing near.

"It is only necessary to add that, within half an hour from the time when the first injection took place, the patient was partaking of mutton-broth, and was partly feeding himself."

Further on, in writing of another case of sunstroke, he says: "I found him (the patient) completely comatose, with dilated pupils, stertorous breathing, face very much flushed, skin of body red and *burning hot*, pulse rapid and full. I dissolved twenty grains of quinine in twenty minims of dilute sulphuric acid and about three ounces of water, and attempted to make him swallow it; but in vain. . . . A solution of five grains of quinine in five minims of dilute sulphuric acid, and fifty minims of water, was put under the skin in different places about the shoulders. Within one hour the heat of the body had perceptibly decreased; he steadily improved during the night, was quite sensible next morning, and recovered without any bad symptoms. . . . I attended five cases of heat-apoplexy at Barrackpore, and employed this method, and they all recovered."

Moreover, this view of the action of quinine suggests its applicability to other morbid conditions which do not fall within the proper scope of this paper.

Thus, then, we seem to be warranted, both from the facts of theory and of empiricism, in concluding that quinine exerts its antipyretic action by restraining the processes of nutrition and oxidation, especially when they are forced beyond their normal activity; for experience does not suggest the employment of quinine in a single morbid condition, at least not to our knowledge, where these processes are carried on below their normal rate. Even the more successful empiric has learned through long experience that, if, during the treatment of fever, quinine produces coldness of the extremities, its further use is contraindicated.

Now, in regard to the practical application of this principle of the action of quinine, it is essential for us to point out the quantity which is necessary to produce its antipyretic action, as well as the most appropriate time for its administration. Since fever and the action of quinine are virtually two opposing forces, it is evident that the force which is intended to produce depression must be greater than the one which is to be overcome; hence it follows that large quantities are required to reduce a high temperature, and smaller ones for a less degree. Here, again, the facts of theory and those of practice confirm each other, for all modern authorities agree that large doses of quinine are necessary to make it yield its best antipyretic results. Liebermeister, one of the most noted authors, advises that from twenty to forty-five grains should be given. The most suitable time for its administration is evidently before or in the incipient stage of pyrexia, for certainly, since we take it for granted that pyrexia and the action of quinine are two antagonistic forces, it requires a less expenditure of force to prevent the rise and production of fever than it does to subdue it after it is fully developed. The time for a repetition of the dose depends on the length of time which it takes to exhaust its energy, or until it is excreted; and, as very little if any is decomposed by the body, its effects endure for a long period. Dr. Bence Jones, in his investigations "On the Fluorescence of the Textures," found that "in fifteen minutes the quinine had passed everywhere. In three hours it was at its maximum, and remained in excess for six hours. In twenty-four hours it was much diminished, and in forty-eight hours scarcely perceptible." Since quinine remains in the body for such a long time, an oft-repeated dose becomes unnecessary. And Dr. H. C. Wood, in his "Therapeutics," says that Liebermeister "insists that from twenty to forty-five grains must be *given within the hour*, and not repeated oftener than once in twenty-four or forty-eight hours."

Alcohol.—The remedial value of alcohol in fever has been known for a very long period, and it has been employed chiefly for its known power to support the body under the devitalizing influence of this condition. Lately, however, it has been demonstrated that alcohol possesses the decided property of lowering the temperature in the febrile state. For example, it is found that, after fever or pyæmia has been produced in the lower animals by the introduction of putrid matter into the circulation, alcohol has the power to diminish the degree of bodily heat. To our knowledge three different theories have been offered in explanation of these properties of alcohol, viz.: 1. That alcohol, through its known power to coagulate albuminous tissues, thus checks the waste of tissue; or, in other words, that it inhibits or interferes with the processes of oxidation and nutrition. 2. That by a so-called stimulant or irritant action it possesses the power to goad or spur the human tissues into greater activity, operating on the same principle as does the application of a whip to a horse, which impels him to accomplish a larger amount of work without imparting any real or substantial strength. 3. That it not only does not interfere with the normal activities of the processes of oxidation and nutrition, but that it becomes a material with which to carry on their operations, and deflects them from a less to a more healthy condition; or, in other words, that it has the action of a food.

It is evident, if the first and second views of the action of alcohol are correct, that it must remain intact or unchanged in the body, for the influence of coagulating the bodily tissues, and of goading them into greater action, is attributed to alcohol only and not to any of its products of decomposition; hence it must be positively shown that the animal body has not the power to decompose alcohol, and thus allows it to come in contact with its structures in sufficient quantities to produce the effects which are ascribed to it in the first and second theories of its action—in short, that it leaves the body as alcohol. But if it can be shown, on the contrary, that alcohol does not remain unchanged within the body, that it is oxidized and does not leave the body as alcohol, then it becomes very manifest that the first and second views fall to the ground. Hence the chief part of an argument which leads to a true conception of the *modus operandi* of alcohol naturally depends on the disposition which is made of it by the organism. To decide this, we shall mainly bring forth direct experimental evidence.

Physiological Action of Alcohol.—Liebig held the idea, which he chiefly based on chemical considerations, that alcohol is consumed within the body; but in the year 1860 MM. Lallemand, Perrin, and Duroy, made some experiments which led them to believe that all the alcohol taken was thrown off the body unchanged. Subsequent investigations, however, had a tendency to cast a doubt on the correctness of these observations. Dr. Dupré repeated these experiments, with a view to obtain both quantitative and qualitative results, as until then no successful effort had been made to get the probable quantity of alcohol which was supposed to have been eliminated, and he "starts with the proposition that obviously three results may follow the ingestion of alcohol. All the alcohol may be oxidized and none be eliminated, or a portion only may be oxidized and the rest be eliminated unaltered, or, lastly, all may be eliminated again unaltered. Assuming the last to be the case, it would follow that, if a certain quantity of alcohol be taken daily, the amount eliminated would increase from day to day, until at last the amount eliminated daily would equal the daily consumption, be this five, ten, or more days. If, on the other hand, all the alcohol consumed is either oxidized or eliminated within twenty-four hours, no increase would take place in the daily elimination, in consequence of the continuance of the alcohol diet." Now, from the results obtained in two series of experiments conducted upon himself, Dr. Dupré sums up as follows:

"The amount of alcohol eliminated per day does not increase with the continuance of the alcohol diet; therefore all the alcohol consumed daily must of necessity be disposed of daily, and, as it certainly is not eliminated within that time, it must be destroyed in the system.

"The elimination of alcohol, following the ingestion of a dose or doses of alcohol, ceases in from nine to twenty-four hours after the last dose has been taken.

"The amount of alcohol eliminated, in both breath and urine, is a minute fraction only of the amount of alcohol taken" (Pavy, "Food and Dietetics").

These results show that at least some of the alcohol is consumed by the body, and so verify the idea held by Liebig. But, as there must evidently be a limit to the quantity of alcohol which the body is capable of consuming, the late Dr. Anstie undertook the task of ascertaining how much alcohol is thus destroyed within the body; and as this part of our subject is very important, in order to gain a proper apprehension of the action of alcohol, we deem it necessary to give his own vivid description of the experiments, with their results, from the *Practitioner*, July, 1874, vol. xiii., "Final Experiments on the Elimination of Alcohol:"

"In July, 1873, two healthy terrier-dogs were procured, one (A) weighing 10 lbs., the other (B) weighing 9 lbs. 12 oz.

"The apparatus employed must now be described. A zinc box was prepared, fitted with a lid which sank into a putty-joint, quite air-tight. At one end of the box was an opening fitted with a valve opening inward, to admit a current of air; at the other end was an opening connected with a steam exhaustion-apparatus, or aspirator. It was found that by these means about twelve cubic feet of air per hour were drawn through the chamber. The current of mixed steam and air was made to pass through two condensers successively; the first was cooled by water at the ordinary temperature, the second by iced-water. In these condensers almost all the steam and the greater part of any alcohol present must be condensed. In the distillate obtained, amounting to about three pints in the course of four hours, the alcohol was estimated by repeated distillation and oxidation to acetic acid.

" *Control-Experiments.* — Everything being arranged as usual, but no animal being in the box, the current of air previous to entering the chamber was passed over a measured quantity of very diluted spirit (two per cent.), which was thus gradually evaporated; the rate of evaporation was so timed that the process occupied, as nearly as possible, four hours. The air thus charged with alcohol had to pass through the entire apparatus, and the alcohol was estimated in the distillate in the manner already described. Two such experiments were conducted:

	Taken up.	Recovered as Acetic Acid.
First experiment...........	1.27 grain.	0.89 grain.
Second experiment.........	2.54 grains.	1.89 "

" About three-fourths of the alcohol evaporated, therefore, is recovered from the distillate.

" *Direct Experiments.*—Dog A (weight 10 lbs.).—On July 22d this dog was placed in the box for four hours; the distillates from mixed steam and air were collected, and the distillate of the urine passed during four hours was added. The combined fluid neutralized 0.3 c. c. deci-normal solution of soda, equivalent to 0.021 grain, or (adding one-third for loss, as shown by control-experiments), 0.028 grain of matter oxidizable to acetic acid.

" *July 23d,* 8.45 A. M. — ʒ ij brandy, containing 47.73 grains of absolute alcohol, were given to the dog, which was then placed in the box at 9 A. M. and kept there until 1 P. M. Acetic acid obtained from distillate, including urine, neutralized 1.35 c. c. deci-normal soda solution, equivalent to 0.096 grain absolute alcohol, or (adding one-third for loss) 0.128 grain.

"At 5 P. M. the dog was again put into the box and kept in till 9 P. M. Acetic acid obtained from distillates, including urine, neutralized 0.1 c. c. deci-normal soda solution, equivalent to 0.0071 grain absolute alcohol. This amount is only one-third of that obtained in an equal period previous to any brandy being given, and it is therefore seen that elimination must have been already completed at the end of the eighth hour from administration of the dose. Taking, then, the amount of alcohol eliminated between four hours and eight hours after the dose at one-half of that eliminated during the first period of four hours, or 0.064 grain absolute alcohol, we arrive at a conclusion that the total elimination after a dose of 47.73 grains of absolute alcohol amounted to 0.192 grain of absolute alcohol. . . .

"Dog B (weight 9 lbs. 12 oz.).—From July 12th (7 A. M.) to July 22d (7 A. M.) this animal was given ℥j daily of brandy, containing 190.92 grains absolute alcohol; the daily quantum was administered in two portions.

"*July* 22*d*, 11.30 A. M. the dog was put into the box, and kept there until 3.45 P. M. Owing, perhaps, to the intense heat of the weather, and the small amount of drink given to the dog, no appreciable quantity of urine was passed during this time. Acetic acid obtained from distillates neutralized 2.1 c. c. deci-normal solution of soda, equivalent to 0.15 grain of absolute alcohol, or (adding one-third for loss) 0.21 grain, which, calculated in twenty-four hours, would give 1.13 grain absolute alcohol as a whole day's elimination.

"*July* 23*d*.—The dog, having had its usual ℥ss of brandy at 7 A. M., was killed at 9 A. M. It is important to note the exact steps of the killing and the subsequent processes.

"The dog was placed in a very large basin, in a spacious, cool room. I then pithed him with a long, narrow knife, death being nearly instantaneous. The blood which then and at further stages escaped was carefully caught up into sponges and plunged into a large stone jar already containing eight pints of distilled water. With a very active assistant helping me, I then proceeded, with the utmost rapidity, to skin and cut the animal into minute fragments, none of them more than about one inch long, every bone being cracked open, and every individual fragment as it was cut from the body, being instantly plunged into the water. In about thirty minutes every fragment of the dog's body, and all its solid and fluid contents were plunged into the water. The jar was then securely closed, and the mixture frequently agitated until 11 A. M., when one pint of the now thoroughly mixed mass was distilled, and the alcohol estimated in the usual way. The acetic acid obtained neutralized 23.9 c. c. deci-normal solution of soda, equivalent to 1.69 grain absolute alcohol. If we multiply this by 14 (as there were about 14 pints total fluid), we get 23.66 grains of absolute alcohol as the product of the dog's whole body and all its contents. It must be remembered, moreover, that this figure ought probably to be much reduced, as it really stands for the whole of the substances in the body which were capable on oxidation of yielding acetic acid. From Dr. Dupré's previous researches, it would seem probable that the amount of such substances, not being ingested alcohol, was considerable. But, taking the whole as ingested alcohol, 23.66 grains is, of course, a perfectly trivial residuum to be found in the animal's body after ten days' daily allowance of 190.92 grains absolute alcohol, of which 95.46 grains had been taken not two hours before death. Add to this the fact that the total alcohol eliminated on the tenth day of brandy-diet was only 1.13 grain absolute alcohol, and it must, I think, be plain to any candid reader that the dog did, on each day, dispose, by other means than by elimination, of very nearly the whole of his potion of 190.92 grains absolute alcohol."

The experimental evidence of Dr. Anstie, beyond a doubt, establishes the fact (if we reckon in proportion to the weight of the dog and man) that the average human adult is capable of decomposing one ounce and a half of pure alcohol. Now, if the human body is capable of oxidizing or consuming one ounce and a half of pure alcohol, it is very apparent, according to the experiments of Frankland, Favre, and Silberman, that an enormous amount of force is liberated in this operation, since they found that one centimetre of alcohol during combustion has the capacity to raise the temperature of 7 litres of water 1° C., while pure coal raises the temperature of 8 litres of water 1° C.; so the force-yielding power of the former is almost equal to the latter. The question naturally arises as to the disposition of this force which is thus set free, and what is its influence on the living economy; for, it is very clear, from the law of the conservation of force, that its effects must be manifested somewhere.

It is commonly but erroneously supposed that, since alcohol when oxidized exterior to the body expends all its force in the form of heat, it must necessarily manifest its energy directly in the same form when consumed in the body; and, since it is known that alcohol does not elevate the bodily temperature to any material degree when oxidized, but that, on the other hand, it has the power to depress the temperature under certain conditions, these facts have been held up as being fatal to the food-theory of alcohol. However, such an argument falls to the ground when it is remembered that other substances, which undergo similar changes in the body, do not manifest their energy, at least not the greater portion of it, directly in the shape of heat; for, according to the calculations of Prof. Frankland, says Pavy in his "Food and Dietetics," "one pound of beef-fat by oxidation will generate heat sufficient to raise the temperature of 9,069 lbs. (about four tons) of water 1° C.; that the same quantity of arrow-root will similarly raise the temperature of only 3,912 lbs. of water; cane-sugar, 3,348 lbs.; and commercial grape-sugar, 3,277 lbs." Now, it cannot be possible that these substances give out or manifest their entire energy in the same form of motion within as they do without the body, for if this did occur the temperature of the body after every meal consisting of these articles of diet would be raised to a point sufficient to consume itself, or at least to a degree altogether incompatible with vital action, whereas the truth is, that the temperature of the body after the ingestion of a meal is elevated to but a slight, and sometimes inappreciable, degree. That heat can be consumed or converted into a form of motion or force, in which it is no longer sensible to the thermometer, is fully illustrated by various natural processes, as the following examples demonstrate: Nitrate of potash, chloride of sodium, sugar, and other substances, have their temperature diminished on being dissolved in water. A mixture of ice and common salt, as is commonly known, reduces its own temperature many degrees below the freezing-point of water. Again, apply heat to a vessel which contains ice and a Fahrenheit thermometer, and watch the result. The needle of the thermometer will take up its position at 32°, and remain there until the last particle of ice is melted, in spite of the incessant application of heat to the ice during all this time; after which the thermometer makes a gradual move, and finally settles at 212°, where it remains until the water is changed into steam.

These illustrations, and others which might be cited, make it apparent that a disappearance of heat takes place during these operations, that heat retires to some place, where it is no longer sensible to the thermometer; and this at once raises the question as to what becomes of the heat which is thus communicated to and consumed in these processes. And, on inquiry, we shall learn that it performs work, and that when it performs work it cannot show itself as perceptible heat. For liquefaction implies a change from the solid to the liquid, and vaporization from the liquid to the vaporous state, and, in order to accomplish this transition, a certain amount of energy in the form of heat must be expended, and this is work. What special sort of work this is, in which heat is engaged, is best described by Prof. Tyndall, whose observations on this point are distinguished for their originality and their clearness in conception and expression, and to whom all learners in physiology will ever feel grateful for placing the phenomena of heat on such a basis that they can be applied to organic as well as to inorganic processes. He says, on page 126, in his "Heat as a Mode of Motion:" "Suppose a certain amount of heat to be imparted to this lump of lead, how is that heat disposed of within the substance? It is applied to two distinct purposes—it performs two different kinds of work. One por tion of it excites that species of motion which augments the temperature of the lead, and which is sensible to the thermometer; but another portion of it goes to force the atoms of lead into new positions, and this portion *is lost as heat.* The pushing asunder of the atoms of the lead in this case, in opposition to their mutual attractions, is exactly analogous to the raising of our weight in opposition to the force of gravity, a loss of heat, in both cases, being the result. . . .

"In this case, then, the heat not only imparts actual energy to the vibrating atoms, but also accomplishes what we may call *interior work;* it performs work within the body heated, by forcing its particles to take up new positions. When the body cools, the forces which were overcome in the process of heating come into play, the heat which was consumed in the recession of the atoms being restored upon their approach."

Now, the animal textures are in a great many respects analogous to this piece of lead. They are likewise composed of molecules; and we have before observed that the difference in the consistency of various bodies is owing to their inherent degrees of molecular motion—solid bodies having the least and gaseous the greatest degree of molecular motion. Since the greatest portion of the animal tissues (excepting water) exists in the semi-solid state, it is manifest that their molecules must preserve a certain degree of motion in order to retain their normal degree of firmness and stability; but it is equally clear that they, like all other molecules, have a tendency to be brought together by their mutual attractions, to which we also alluded before, and if this should become universal throughout the bodily structures, it would destroy their power to perform their normal functions; hence, it is all-important that a sufficient amount of force be supplied to the molecules of those tissues, to set them in greater activity and thus overcome their mutual attractions. The molecules of the body bear the same relation to each other as does the weight of a clock to the earth. As long as the weight rests on the earth —or the clock is unwound—the attraction between it and the earth is satisfied, and no motion can possibly be communicated by the weight to the clock. But as soon as the clock is wound up—or the weight is separated from the earth—the pull or attraction between the weight and the earth renders the weight capable of imparting a moving power to the machinery of the clock. So the molecules of the body display a like constant tendency to come together, and by so doing they perform the various mechanical movements which the body is capable of making; but when they have been thus pulled together and have their mutual attractions satisfied, it is just as necessary that they should be separated or placed back again into their working position in opposition to their attractive force as it is for the weight and the earth to be separated. And, to overcome this opposition or resistance, work must be expended, and this is the "interior work which is performed by heat in the body—it is the process of forcing the molecules" to take up new positions.

Now, the animal economy, in conferring potential energy on its molecules, or in forcing them to take up positions in which they are able to perform work, consumes or uses up an enormous amount of heat-force, and to this purpose is applied the force which resides in our heat-producing foods. The heat which is thus rendered latent or stored up is given out again whenever the molecules are brought together by their inherent force of attraction, or, in other words, when they are performing muscular, nervous, and other work. For, whenever the animal body undergoes any exercise, or its tissues undergo chemical changes, which in both instances is brought about by the coming together of the textural molecules, and which is constantly taking place in life, heat is developed in proportion to the activity of this process. The potential energy of the body thus vanishes "as the actual energy comes into play."

Therapeutic Action of Alcohol.—The easy digestion and oxidation of alcohol, and its great diffusibility, render it one of the most serviceable of the nitrogenous alimentary substances in point of dietetic value. It is a substance which permeates the bodily structures more readily, perhaps, than than any other force-producing food, and thus is capable of furnishing force to the body which it could not obtain through any other means. To alcohol belongs the unquestionable and exclusive credit of being a substance which is capable of sustaining and nourishing the animal body during the most trying and critical moments of malignant and prostrating diseases, which at once gives it a rank and position in therapeutics which cannot be supplanted by those of any other article of the materia medica. Especially is it deemed valuable in the treatment of fever, for, through the investigations of Prof. Binz and others, it has been shown to exert an antipyretic action.

The most rational way in which the power of alcohol to reduce fever temperature can be explained, rests on the theory of its food-action alone. Fever-action constitutes a devitalizing force which becomes powerful and predominant in proportion as its strength exceeds that of the resisting strength of the body; hence it is very obvious that, since action and reaction are equal, the stronger the body the greater is its adaptability to react on the febrile force. Now, any substance which has the capacity to transmit or communicate force or strength to the body, will, just in that degree, enhance its resisting power, and enable it from day to day to withstand and counteract fever-action to better advantage than it could without the aid of such sustenance and support. Indeed, the overwhelming evidence which favors the modern and more successful treatment of fever is largely due to the persistent and abundant supply of nutritive material which is now prescribed and held essential, but which, in former times, was in a large measure withheld, or supposed to be but of minor importance.

Alcohol, then, exerts its antipyretic action by supplying force to the body, which is expended in the performance of "interior work." Such work is urgently demanded on account of the general waste of force throughout the body, which is caused by the destructive influence of the fever-poison; and particularly at that period when the patient, either through abnormal disgust or severe prostration, becomes unable to partake of any ordinary food, does the suppporting power of alcohol come into play. This view of the action of alcohol also gives an intelligent explanation to the common observation that the same animal body is capable of consuming larger quantities of alcohol in an exhausted state than in a state of health, which power of consumption will gradually diminish in proportion as recuperation of the system takes place. An exhausted condition of the system implies a previous waste of bodily force; therefore it is evident that the demand for force, in the process of restoration, will be great, but will diminish in proportion as it is supplied.

When administering alcohol in the treatment of fever, great care must be exercised not to introduce a larger quantity than the system is capable of consuming or oxidizing. If this line of dosage (which varies in different individuals, and in different conditions of the same individuals) is exceeded with alcohol, it invariably displays its narcotic effects, such as flushing of the face, giddiness, etc., which are always undesirable.

Art. III.—*Animal Broth as an Aliment in Disease, with a Series of Analyses.* By J. Horton, M. D., assisted in the Analyses by H. L. Horton, M. D.

If eating were simply the result of a long-continued habit, first indulged in by our most remote ancestors as a pleasurable pastime, and which had ultimately become one of the laws of our being, we might hope that our race, by a strict and correspondingly long continuance in a habit of abstaining from food, might in a retrograde manner ultimately and entirely rid itself of the necessity of eating. We must believe, however, that the necessity for food did not originate in that manner; consequently, abstinence from food, no matter how continuously or how perseveringly persisted in, could not result in anything but destruction, for the simple reason that assimilation and destructive assimilation—in other words, waste and repair—is one of the fundamental laws of life, and is indelibly stamped upon every molecule entering into the composition of living organic forms; and, in regard to ourselves, it may be said to be one of the primary covenants under which we involuntarily accept of life—a covenant which it is our duty to obey to the very best of our ability, in all the varying and ever-changing conditions under which we may be placed. To the strictest interpretation of that covenant do we agree to abide until it ceases to operate, and expires by limitation. To keep that covenant inviolate; to be able always to supply our bodies with the precise quantity and quality of food necessary for its preservation—the natural wear and tear of time alone excepted—would be comparatively an easy task if we were guided by the same unerring instinct as the animals below us. They, in a state of nature, find all the substances suitable for their nutrition ready at hand, and exactly adapted to the structure and capabilities of their digestion. They are also endowed with an instinct that unerringly directs them in the selection of their food, both as to quantity and quality. They have also their brain-structure hereditarily, and wellnigh imperishably, stamped with the experience of their race. But, with us, how different! We have intelligence for our guide, it is true; yet the instinct in us, if it exists, is not strong, and is liable to great perversions, especially in disease, and under a high state of civilization, where, by prejudices of education, and by moral and physical inheritance, our tastes, in many cases, are no more to be relied upon than an intoxicated pilot when intrusted with the charge of a vessel in a storm. We therefore have to rely mainly on our knowledge of the anatomy and physiology of our bodies, and the little written experience of our race, combined with a small amount of individual experience. These sources of knowledge, however, are quite ample for us in a state of health, but they fail us often in disease; and probably no one more fully realizes the want of precise knowledge of this subject than the physician. It was probably this chain of thought which led Hippocrates to say: "If the same nourishment were fitted for the patient as well as for the man in health, nobody would have sought to know what food is proper for the sick; this it is which constitutes a physician." The physician, when called to a case, after making a correct diagnosis, and placing his patient under proper hygienic conditions, such as rest, pure air, proper degree of temperature, etc.—in short, such as would be sanctioned by sound hygienic, physiological, and pathological principles—and after taking into account, not only the state of the system as a whole, but also interrogating each organ and function in detail, finds, when he attempts to designate, with the same scientific precision, the quantity and quality of food which that system requires under existing conditions, that his science upon that point is sadly deficient. Were it possible for him to perform all this properly, he would then have performed by far the largest share of his task. In speaking thus strongly of hygiene, and food, I would not be understood as undervaluing our therapeutical agents. Quite the reverse. I would place a very high estimate upon them, and I cannot conceive how any well-balanced, well-informed mind can doubt the efficacy of our therapeutical agents, when administered with a fair knowledge of their effects upon the system in health and in disease; of their power to retard excessive nerve-waste, to calm inordinate cardiac action, to relieve pain; in short, to so direct and control the natural forces of the body as to cause a natural action to usurp the place of a diseased action.

Nutrition being the cardinal function of life—a nucleus, as it were, around which all others revolve, and upon which they depend for their continuance, especially in disease—it is the duty of the physician to be particularly mindful of this function, it being the one that increases its tolerance of disease, strengthens the powers of the system to exist as an organic unit, giving to it that pliability which allows it to safely yield to the storm of disease, as well as imparting to it that elasticity which will enable it to rise again when that storm has exhausted its force.

In designating a diet for a patient, the physician should not only have a definite knowledge of the chemical composition of every article of diet which he selects, but also the precise office each element is destined to fill when it is digested and becomes a part of that system. In fact, the two are so intimately connected that a definite knowledge of one cannot well exist without a knowledge of the other. If he is not to some considerable extent informed upon this important part of his profession, and does not fully realize that "starvation is often the cause of death, marching silently in front of every disease in which alimentation falls below the natural standard, reaching its natural termination sometimes sooner sometimes later than the disease which it covertly accompanies, and that it may supersede the disease of which at first it was merely an incidental element," he will often find a system, which he thought was being nourished up to the topmost standard, in reality starving for the very elements which a wiser judgment would have furnished, and which would have prevented it from being wrecked on the shoals of inanition.

In very early life, and extreme old age, the selection of food for a patient does not demand of the physician that care and thought that are demanded of him in the intermediate periods. In the one case Nature has furnished it in perfection; in the other, it is simply adding a little more fuel to the aleady flickering flame ere it gives forth its final blaze. It is in the middle period—the battle-ground—where life is checkered by so many cares, anxieties, hopes, and fears, that the physician's skill is taxed to its very utmost. I would not be understood from this statement as claiming that in disease food is not as necessary at these extreme periods of life as in the intermediate one, for it is a well-known fact that deficient alimentation kills at dawn, and near the close of life, more quickly than at its meridian, but only that it requires more care and skill to select such food as contains all the elements necessary for the system at this period. Our race might be compared to the vegetable: along the northern border of an equatorial desert, where grows but the simplest variety of dwarfed grass, amid the arctic snows, where live the scarlet *Algæ*, we find no competition, no battle, except with the surrounding elements, and that simply for existence; but the intermediate period is the ground upon which the great battle is fought, and in which conflict only the fittest survive. It is at this stage or period of life that the greatest skill of the physician is required.

It is probable that no one article of diet has been more relied upon in the past, in cases of great extremity, than animal broth. It is an article about which a few physicians have said much, many have said something, yet no one enough. Within the past few years the demand for it by physicians in practice has been so great that large manufactories have been established in several places: one, located on the Uruguay River, South America, used in the production of this article, during eight months of the year 1873, the flesh of 122,075 cattle, of the value of $1,650,000. The extract of meat derived from this enormous quantity of flesh was 570,000 pounds. When one contemplates this immense production, and remembers that it is only one of several manufactories in the world, and that the product of them all combined does not contain a single pound of what is strictly termed food, we can only wonder that this great waste of time, money, and material, still continues.

Were I called upon to assign to animal broths their proper position among the agents we give to sustain a patient where the danger of dissolution lay in asthenia, I would say: first, alcohol; secondly, organic salts; lastly, tea and coffee—for no doubt the physiological action of animal broths is due to the organic alkaloids and acids which they contain (lactic acid, inosenic acid, creatine, creatinine, inosite, etc.), and as their effects on the system are very similar to those of the active principles of tea and coffee (theine and caffeine), from which they differ mainly in strength, it must be concluded that animal broths, beef-tea, and extract of meat, are more of a "vital restorative than a nutritious food." Prof. Liebig classes beef-tea and coffee under the head of "nervous food," as they are of themselves incapable of supporting nutrition and maintaining life, yet they have temporarily sustaining properties greater than tea and coffee, yet less than alcohol.

The saline-mineral constituents of beef-tea are the acid phosphate of potassa, phosphates of magnesia, lime, and soda, chloride of potassium, and a small quantity of chloride of sodium. They do not participate in the chemical changes going on in the body, but serve by their presence to enable those changes to go on which are necessary for the process of nutrition.

From the present state of our knowledge upon this subject, the physician should not direct beef-tea to be given in quantities greatly above what is necessary for nutrition, and for exciting the gastric glands to action, just as, in health, we take a small amount of soup at the beginning of a meal to excite secretion and stimulate digestion.

Having thus briefly stated the part which beef-tea, or the organic salts (for that is what it contains) play in the nutritive process, I will proceed to give the result of a series of carefully-conducted experiments in the manufacture of tea from beef and other kinds of flesh, for the purpose of showing the exact amount obtained in each of the various methods pursued, which were the same that would be adapted in any ordinarily well-regulated household. The fluid was in each case expressed from the insoluble fibrinous matter with the aid of an ordinary lemon-squeezer, after which it was evaporated to dryness, and the residue carefully weighed:

No. 1.

Beef finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc.	4,228 gr.
Water	2,398 “
Extractive matter	374 “

No. 2.

Beef finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc.	4,168 gr.
Water	2,460 “
Extractive matter	372 “

No. 3.

Beef finely divided	7,000 gr.
Water	Oss.

Macerated sixteen hours, and boiled fifteen minutes.

Fibrine, etc.	4,180 gr.
Water	2,460 “
Extractive matter	360 “

No. 4.

Beef divided to the size of filberts	7,000 gr.
Water	1 qt.

Macerated one hour, and boiled one hour.

Fibrine, etc.	4,080 gr.
Water	2,560 “
Extractive matter	560 “

No. 5.

Beef finely divided	7,000 gr.
Water	Oiij.

Macerated eight hours, and boiled to Oj.

Fibrine, etc.	4,350 gr.
Water	2,280 "
Extractive matter	376 "

No. 6.

Beef finely divided	7,000 gr.
Water	Oj.

Shaken thirty minutes, and boiled fifteen minutes.

Fibrine, etc.	4,080 gr.
Water	2,440 "
Extractive matter	480 "

No. 7.

Beef finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and expressed cold.

Fibrine, etc.	4,890 gr.
Water	1,610 "
Extractive matter	500 "

No. 8.

Beef finely divided	7,000 gr.
Soda, bicarbonate of	ʒj.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	5,208 gr.
Water	1,352 "
Extractive matter	440 "

No. 9.

Beef finely divided	7,000 gr.
Pepsine	ʒj.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc.	4,368 gr.
Water	1,872 "
Extractive matter	760 "

No. 10.

Beef finely divided	7,000 gr.
Hydrochloric acid, C. P.	ʒj.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,848 gr.
Water	1,337 "
Extractive matter	815 "

No. 11.

Beef finely divided	7,000 gr.
Phosphoric acid dilute	ʒj.
Water	Oj.

Shaken thirty minutes, and boiled fifteen minutes.

Fibrine, etc	4,080 gr.
Water	2,360 "
Extractive matter	560 "

No. 12.

Beef finely divided	7,000 gr.
Phosphoric acid dilute	ʒj.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,020 gr.
Water	2,320 "
Extractive matter	660 "

No. 13.

Beef finely divided	7,000 gr.
Pepsine	
Hydrochloric acid	āā ʒj.
Water	Oj.

Shaken thirty minutes, and boiled fifteen minutes.

Fibrine, etc	4,321 gr.
Water	1,799 "
Extractive matter	880 "

No. 14.

Beef finely divided	7,000 gr.

Submitted to the temperature of 212° Fahr. for four hours, in a closely-stoppered glass jar.

Fibrine, etc	4,280 gr.
Water	2,570 "
Extractive matter	150 "

No. 15.

Beef finely divided	7,000 gr.
Water	Oj.

Macerated one hour, and boiled fifteen minutes.

Fibrine, etc	4,320 gr.
Water	2,350 "
Extractive matter	330 "

No. 16.

Beef broiled *rare*	7,000 gr.

And expressed.

Extractive matter	205 gr.

No. 17.

Beef finely divided	7,000 gr.
Pepsine	ʒj.
Hydrochloric acid, C. P.	ʒj.
Water	Oj.

Added at the temperature of 100° Fahr., was then shaken thirty minutes, and kept at the temperature of 100° Fahr. for six hours, then boiled fifteen minutes, and expressed.

Fibrine, etc	3,420 gr.
Water	2,760 “
Extractive matter	820 “

No. 18.

Veal finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	5,061 gr.
Water	2,729 “
Extractive matter	210 “

No. 19.

Pork finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,459 gr.
Water	2,346 “
Extractive matter	195 “

No. 20.

Mutton finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine	4,049 gr.
Water	2,651 “
Extractive matter	300 “

No. 21.

Chicken finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,260 gr.
Water	2,260 "
Extractive matter	480 "

No. 22.

Chicken finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and expressed without cooking.

Fibrine, etc	4,940 gr.
Water	1,100 "
Extractive matter	960 "

No. 23.

Wild-pigeon finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	5,280 gr.
Water	1,120 "
Extractive matter	600 "

No. 24.

Tame pigeon finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,280 gr.
Water	2,180 "
Extractive matter	540 "

No. 25.

Milk Oj., or 7,515 gr., evaporated to dryness on a water-bath = 1,366 gr.

No. 26.

Twenty-four, or 1 lb., of best East River oysters, evaporated to dryness = 1,820 gr.

No. 27.

Quail finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and expressed without cooking.

Fibrine, etc	4,800 gr.
Water	1,510 "
Extractive matter	690 "

No. 28.

Quail finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,060 gr.
Water	2,660 "
Extractive matter	280 "

No. 29.

Venison finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	3,600 gr.
Water	3,040 "
Extractive matter	360 "

No. 30.

Partridge finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	3,340 gr.
Water	3,180 "
Extractive matter	480 "

No. 31.

English snipe finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,200 gr.
Water	2,480 "
Extractive matter	320 "

No. 32.

Woodcock finely divided	7,000 gr.
Water	Oj.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,440 gr.
Water	2,080 "
Extractive matter	480 "

No. 33.

Canvas-back duck finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	3,840 gr.
Water	2,920 "
Extractive matter	240 "

No. 34.

Pinnated grouse finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	3,900 gr.
Water	2,723 "
Extractive matter	377 "

No. 35.

Squirrel finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,140 gr.
Water	2,564 "
Extractive matter	296 "

No. 36.

Rabbit finely divided	7,000 gr.
Water	Oss.

Macerated eight hours, and boiled fifteen minutes.

Fibrine, etc	4,430 gr.
Water	2,260 "
Extractive matter	310 "

The late Dr. Anstie, in writing of the treatment of delirium tremens (*Lancet*, 1873, p. 67), after naming the therapeutical agents, says: "Meantime the patient must be sedulously fed with the most nourishing things which he can be got to take;" and, after mentioning several articles of food, states that, if we are driven to very small quantities, nothing equals a jelly prepared as follows: "Lean fillet of beef, three pounds; lean veal, three pounds; lean mutton, three pounds; cut up small and put in a saucepan with *no water;* simmer (never boiling) by the side of the fire for eight hours; strain the liquid from a small quantity of tasteless, insoluble fibre that remains, and let it jellify into a small, soft mass. Of this immensely *concentrated meat*, minus very little but the water which has been driven off, a teaspoonful or two is a wonderful support. The moment you are called to a delirium-tremens case, order such a jelly to be made, unless the appetite for solids exists in a fair amount."

Dr. Anstie in giving his directions evidently forgot to state that the saucepan should be tightly covered; otherwise, instead of having a soft jelly, he would have simply desiccated meat. By reference to experiment No. 14—beef heated in a vessel without water—it will be seen that he gave only a few grains of organic salts at a dose, together with a small amount of gelatine derived from the veal.

For the purpose of showing that our standard medical works are astray in the manufacture of beef-tea, I will make a single quotation from one of the latest, Ziemssen's Cyclopædia, a work now partly issued. In vol. i., p. 232, under the head of "Dietetic Treatment," the following statement is made: "In those who are quite low, it is well to use concentrated beef-tea, prepared by long boiling of the meat in a close stoppered bottle." (*See* experiment No. 14.)

Hydrochloric acid in the manufacture of beef-tea was first introduced by Dr. T. M. Lounds, of the Bombay army, who used "one pint of water acidulated with eight drops of strong hydrochloric acid, to one pound of meat stirred ten minutes, and then strained," and gave it uncooked in cases of cholera. It having been administered without heating, it will be seen by reference to experiment No. 7 that it contained nutritive matter which it would not have contained had it been subjected to a temperature of 180° Fahr. By referring to experiment No. 10, it will be seen that, had more acid been added, there would have been a still larger amount of nutriment in the infusion.

It will be seen, by reference to experiment No. 7, that the material, when expressed without cooking, contained a much greater amount of solid matter, of which a large proportion might be classed as food. In this uncooked condition it would be very difficult to induce a patient to take it. If chicken is used instead of beef, it may be slowly added to boiling farina, made with milk, briskly stirring all the while to prevent coagulation. In the preparation of this compound it is necessary to leave all seasoning out of the tea, and to make calculations for the additional amount of fluid to be added to the farina, so that it will be of the proper consistence when cool enough to be taken. Where chicken was used I have seen the tea from one pound of lean meat added to a bowl of farina, without discoloring or changing its taste sufficiently to be discovered by the patient.

A careful reader of the above experiments must have noticed that half a pint of water to one pound of meat furnishes as much extractive matter as any greater amount; that long boiling does not increase the strength; that from four to six hours' maceration is desirable where time will allow; that being shaken thirty minutes equals eight hours' maceration, which is quite an object where time is valuable.

Where we wish to get some food from the meat, pepsin and hydrochloric acid are important additions, or, where both are not at hand, either may be advantageously used alone.

The insoluble fibrinous matter may be carefully dried and powdered in a mortar, and then mixed with the tea; in this way we get the nutritious matter of the meat in a finely-divided state, and it will be easily digested. Where the tea is prepared daily, it is more convenient to use one day's meat for the next day's tea; by this means it has time to dry, and is more easily pulverized.

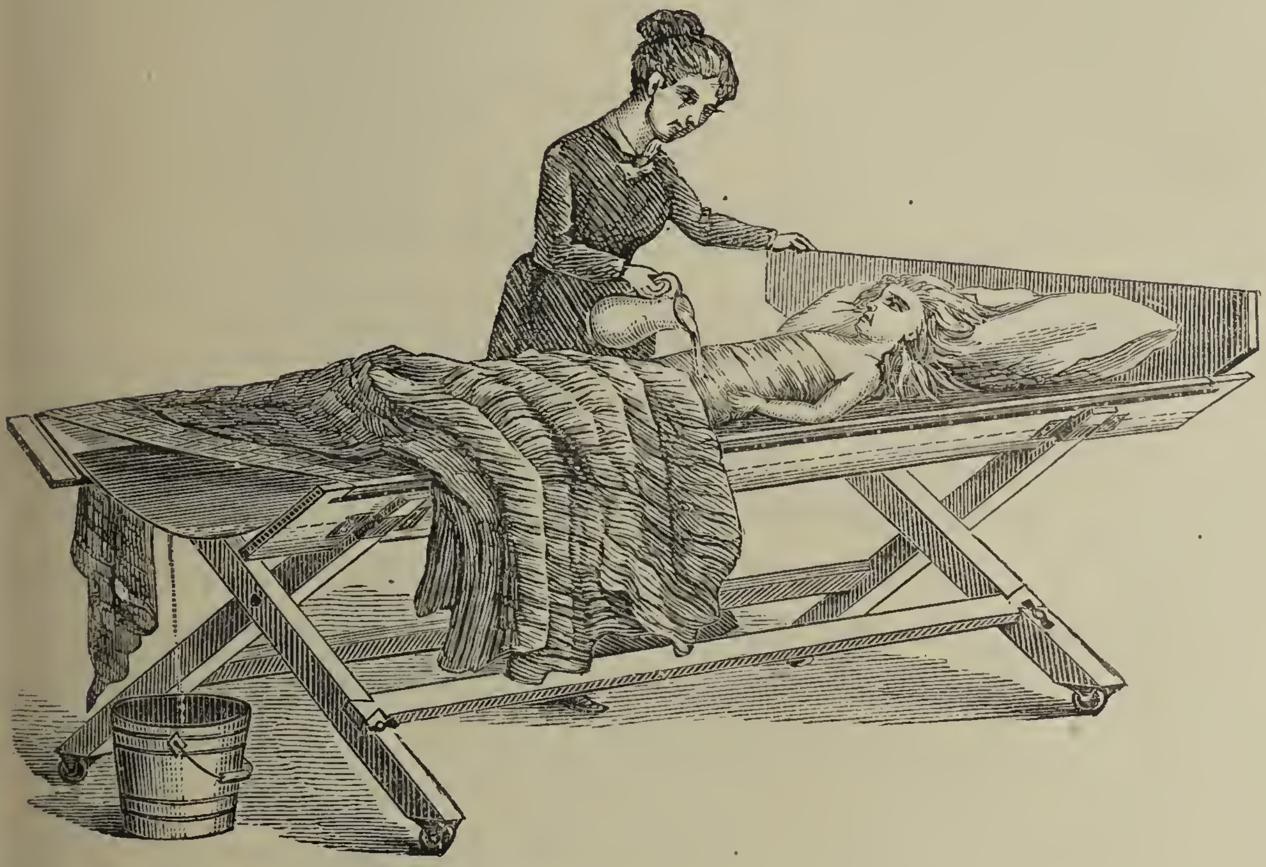
When hydrochloric acid is used alone in the preparation of beef-tea, and the tea is too acid for the patient, it may be neutralized by the addition of sodic carbonate, thus converting it into sodium chloride.

The milk used in experiment No. 25 was drawn from twelve cows, so as to get a fair average, and is introduced here simply to facilitate comparison with the other substances as to amount.

ART. IV.—*Description of a Fever-Cot, to facilitate the Use of Water in Disease.* By G. W. KIBBEE, M. D.

THIS apparatus, for the use of water in any case of fever, designed for the comfort of the patient and convenience of the nurse, is constructed of two boards, one inch thick, six inches wide, and about seven feet long, which are fastened by malleable iron castings to cross-legs, provided with casters, that the patient may be moved about the room, or from one room to another. To the upper edge of the side-pieces are screw-buttons, like those used to fasten down carriage-curtains, upon which is hooked a strong open-work material, of nine-ply cotton thread, woven especially for the purpose, upon which the patient lies.

To the lower edge of these side-rails is fastened rubber-cloth, sloping in such a manner that it catches the drip from above and conveys it into a receptacle at the foot. The cot is so constructed that it can be folded and set away when not in use, or can be taken apart and packed for transportation. Upon this fever-cot water can be used at any desired temperature and in any required quantity. It is well known, to all those who have ignored the matter of wetting beds and bedding, that an almost constant pouring of tepid or cool water is the most effectual as well as the pleasantest method of cooling fever-heat to the normal standard, and holding it there. Water at 80°, 85°, or even 90°, all pleasant to the skin in fevers, if persistently poured from a dipper, or pitcher, over the trunk folded in a sheet or bandage, will rapidly cool down the highest fever-heat, allowing the patient to sleep while it is



going on. This, as will be seen, can be more conveniently done on a double-bottomed fever-cot of this construction than by any other means yet discovered. The hot bath, the warm bath, the tepid bath, the cool bath, the cold bath, and, best and most important of all, in fevers, the tepid or cool pouring bath, can all be more easily given on this cot than by any other known means. The derivative, or revulsive bath, required in cholera, dysentery, congestive chills, etc., where a large quantity of very cold water is poured over the trunk, to be immediately followed by water as hot as the skin can bear, until the reaction is fully established, can be most effectually given on this cot.

Translations.

The Hereditary Transmission of Syphilis. By Dr. M. Kassowitz, Attending Physician to the General Hospital for Children, Vienna. 1876. Translated for the New York Medical Journal by Milo A. Wilson, M. D., Clinical Assistant to Professor of Dermatology, Bellevue Hospital Medical College; late Attending Physician to New York, Northwestern, and Bellevue Dispensaries; Member of County Medical Society; Assistant Surgeon 7th Regiment, N. G. S. N. Y., etc., etc.

Introduction.—The heredity of syphilis, ever since first having come to the knowledge of physicians, has been and is still, up to the present time, one of the most contested subjects in general medicine. But, notwithstanding the manifold discussions and richness of literature, which can be found in connection with but few other medical questions, the advance made in this direction is scarcely noteworthy, and we can say to-day, as we could ten years ago, that there is hardly a point, apart from the mere question of existence, upon which contradictory opinions do not prevail. On the contrary, rather, we can note in certain respects a retrogression; because, propositions, which were apparently overthrown, have been recently brought again to light, and supported with great zeal.

As I have, for a long time past, made hereditary syphilis the subject of deep study, owing to my abundant material for observation and careful analysis of most of the literature pertaining to this subject, I am now in a position to place on record the result of these investigations, chiefly in relation to the question of heredity.

I. *History and Past Views upon the Heredity of Syphilis.* —It is quite natural to suppose that, not long after the first appearance of, or rather after the first historically known epidemic of syphilis, in the last decades of the fifteenth century, the same disease was observed by physicians in newly-born children. But, even among the earliest writers upon this subject, we find decided views upon *acquired* syphilis in children, it may have been for the reason that they only observed such cases, or that they held hereditary syphilitic affections to be acquired. Paracelsus (1558) is the first who, according to general opinion, speaks distinctly of hereditary syphilis; Fernelius (1574) also held this view of the origin of syphilis, as opposed to that of infection, but neither of these writers goes beyond general remarks. The first reliable records, which undoubtedly state that children were observed with inherited syphilis, we find in the writings of Fallopia (1564) and Rondelet (1560). Already, or at about the same time, Augier Ferrierus had spoken of a twofold manner of heredity, viz., through fecundation and through the diseased secretions of the mother; Ambroise Paré had also observed the inoculation of nurses by children with hereditary syphilis.

The inheritance of syphilis was well known to writers in the seventeenth century, but still no progress was made in the study of the same. In the eighteenth century the subject was more deeply investigated by Boerhaave, Van Swieten, and Astruc. The latter made likewise a distinction between inheritance through the semen of the father, and transmission by means of the secretions of a syphilitic mother; habitual abortion in consequence of syphilis in both father and mother was also recognized by him. At the end of the same century, a hospital (Vaugirard) was erected in Paris for the reception of syphilitic pregnant women, and syphilitic children with their nurses, which afforded the physicians Doublet, Mahon, and Bertin, abundant material for observation. By them, the first endeavor was made, not only to furnish a symptomatology of this disease, but also to throw more light upon the conditions of its inheritance. At this time the opinion universally prevailed that syphilis could be inherited by the child from the father, as well as from the mother. The regular course of investigation was, however, already interrupted by the new theories of Hunter (1768), whose work upon syphilis created much contention. As he claimed to have established by experiment that only the primary sore, and not the secondary lesions of syphilis, could inoculate, consequently, inheritance from a syphilitic individual, in the secondary stage, should also be disclaimed; in this last respect, he succeeded in a complete denial of hereditary syphilis. As the heredity of this disease in the new-born was incontestible, he admitted on the one hand that a mother with primary syphilis could transmit the virus to the embryo directly through the circulation; on the other hand, he expounded the doctrine that, where the appearances of hereditary syphilis were undeniable, he regarded not only these, but also the disease of the mother, as deceptive forms, which should not be confounded with true syphilis. In fact, we find minutely described in Hunter's work the most remarkable cases of syphilis and its heredity, accompanied at once by the declaration that, after all, these cases have really nothing in common with syphilis.

Coming from such an authority, the pernicious influence of these errors was at once felt. Even syphilographers like Girtanner (1788), as also specialists in diseases of children, like Wendt (1822) and Henke (1818), denied in the most positive manner the hereditary transmission of syphilis, and believed only in the *infectio per partum*, that is, in the direct inoculation of the child during labor from a primary ulcer upon the genitals of the mother—an opinion which still, in the year 1846 (Kluge), and in 1854 (Pauli), had its followers. Ricord also accepted the Hunterian doctrine of the non-transmissibility of secondary syphilis, and supported his views with all the power of his language. Even if he did not deny the heredity of syphilis, still this incomprehensible error occasioned a constant, Proteus-like vacillation in his opinions upon the question of heredity, and increased the fallacy in relation to this subject to the greatest degree. He granted on the one side the possibility of heredity from both parents, but required that the period of incubation be passed after birth; that primary syphilis in the parents should be regarded in the child as secondary; secondary syphilis in the parents as tertiary; and tertiary symptoms should appear in the child as scrofula. Finally, he supported the view of a retrogressive inoculation of the healthy mother by the diseased fœtus—mere hypotheses, which, as we shall see from an examination of the facts, have not the slightest foundation.

Already, at the beginning of the century, the dispute had arisen, even among those writers who recognized as a fact hereditary syphilis in unborn children, as to the share which the father and mother had in the transmission of the disease. The most extreme opinions soon prevailed, and, while Swediaur (1805), Colles (1837), and others asserted the inheritance as coming exclusively from the father—a view also held more recently by Mayer (1851) and Bednar (1853), and represented by the doctrine that constitutionally syphilitic women were absolutely sterile—there arose, on the other side, a party which denied the transmission of syphilis from the father to the child, and considered it as coming exclusively from the mother.

This last view was contested, in the beginning of this century by Hufeland, Vassal, and Beyer, obviously as a continuation of the Hunterian doctrine. Hufeland even said distinctly that syphilis was communicated in the same manner as, for instance, variola; while Beyer restricted the transmission positively to the last three months of pregnancy, evidently in consideration of the usual period of incubation. This doctrine had very nearly again become questionable, when, in 1854, Cullerier (nephew) brought it again to light, defended it strongly, and found very soon in Notta (1860), Follin (1861), and Charrier (1862) equally zealous supporters. Cullerier (1866), also, in his most recent work on syphilis, maintains this view most radically, and, in a recent discussion (1873) of the Paris Academy of Medicine, Charrier defended the stereotyped arguments of Cullerier, notwithstanding the contrary experience of the whole academy. This theory met with but few followers outside of France; in Norway, only Oewre accepted it entirely, and endeavored to maintain it in three articles which appeared from 1868 to 1872.

Although almost all other writers of that period, excepting those dissenters last mentioned, are unanimous in their opinion of the heredity of syphilis from both parents, this unanimity ceases immediately when certain special questions are in consideration. While, however, the great majority are of the opinion that the syphilis of the father is transmissible to the fœtus without infecting the mother, there are to be heard on the other side important voices, which acknowledge heredity directly from the father, but argue that, in all, at least in almost every case, there is also an infection of the mother. This infection itself is produced in quite different ways, according to the various writers. There are those who impute it to the repeated influence of the semen on the female genital tract (Behrend, Knoblauch); others believe the mother to be infected by syphilitic spermatozoa at the time of fecundation (Baerensprung, Geigel); the majority believe in a communication of syphilis to the maternal organism during pregnancy from a fœtus already contaminated through paternal agency; then, again, there is one party of the opinion that this transmission occurs, at least, in the majority of cases (Colles, Diday, Hutchinson, Rosen, and others), while the other party hold this manner of maternal infection to be possible, but do not deny that the mother may frequently be entirely spared (Ricord, Vidal, Tyler Smith, Fraenkel, Bäumler).

A greater unanimity exists in the views of writers, even if, unfortunately, not favorable to the truth, upon the question, whether a fœtus, healthy at the time of conception, may become syphilitic or not, the mother having contracted syphilis during pregnancy. This mode of the transmission of syphilis is regarded as possible by almost all writers with but few exceptions (Mandon, Behrend, Baerensprung, Geigel), and is accepted *in toto* as self-evident by the majority, without further confirmation. Only a few, however (Cullerier, Oewre), regard this mode of transmission as unconditional, and hold that it may occur during any month of pregnancy. All the others acknowledge that women who have become syphilitic during pregnancy may also give birth to healthy children, and lay down, more or less positively, laws concerning the time of transmission and non-transmission. Beyer and Rosen believe in transmission during the last months of pregnancy, and the immunity of the fœtus during the first months. Ricord, Gamberini, Zeissl, Bidenkap, Köbner, and many others, hold just the reverse opinion as to the time of infection of the fœtus, considering it only possible in the first half, or in the first two-thirds, of pregnancy. Diday, finally, regards it only as possible in the middle months of pregnancy, while during the first and last months infection does not take place; in a word, the confusion in regard to this point, as in most of the others, is almost unprecedented.

Should we now inquire how it is possible, and by what means it may be explained, that so many different opinions, evidently for the most part false and diametrically opposed to each other, can be of any value in regard to an event occurring as frequently as the hereditary transmission of syphilis, and which, since its recognition, has so very greatly interested the medical world, we must attribute it chiefly to two faults in the previous consideration of this subject.

1. The crude, empirical method of procedure in the examination of the various questionable points. There was certainly never a scarcity of theories, but these theories were always deduced from a very limited number of correctly, or incorrectly, observed and recorded cases, taken from a narrow field of observation; and with a theory already constructed all further observations were made rigorously to accord. Further, the principal and fundamental arguments in relation to the process in question, and the various possibilities connected with the inheritance of diseases in general, were entirely overlooked. So it happened that most writers confounded completely, one with the other, the spermatic and ovular heredity upon the one side, and the placental infection of the fœtus upon the other; or, when they made such a distinction, they almost universally held these two opposing views as equally correct, viz., heredity through the semen of the father, and the

placental infection on the part of the mother, ignoring entirely the ovular heredity.

2. The partiality of observation and the consequent incidental accumulation of sources of error which, apart from this, are sufficiently difficult to avoid, such as intentional or unintentional deception on the part of the parents; the absence of an important link in the chain of inheritance, most frequently in relation to the father, and almost always concerning previous brothers and sisters, etc.

The material for the study of the affection with which we are concerned is divided almost equally between syphilographers, obstetricians, and children specialists, and to each one of these specialists this subject of heredity appears in a different light. This is best illustrated in relation to a certain point, viz., that of maternal immunity. Here we have the very remarkable and yet so natural occurrence, that those who deny the immunity of the mother are, without exception, syphilographers of note (Hutchinson, Cullerier, Sigmund, Zeissl, Oewre); while, on the other hand, merely to mention the extremes of the subject, physicians to foundling asylums and the directors of children's hospitals (Bednar, Mayer, Schuller, 1864) will only grant that syphilitic children can be descended from healthy mothers. The first see in their practice and in their lying-in chambers, almost exclusively, syphilitic cases of pregnancy, because it is certain that a non-syphilitic, pregnant woman never enters the syphilitic division of a hospital, nor does she consult a specialist in syphilis; again, physicians to foundling asylums, and children's specialists, have frequent opportunities for observing a sound, healthy mother with a syphilitic child. This antagonism is easily explained by the one-sidedness of observation.

It is, therefore, necessary, if we undertake to explain this intricate question, to obtain, before everything else, a correct view of the course of the heredity of diseases in general on the one side, and to examine into, and advantageously make use of, on the other side, an ample and extended field of observation, according to the theoretically conclusive points at issue.

II. *The Theory of Heredity in General, and Application* *of the same to the Heredity of Syphilis.*—As deficient as we may be in our knowledge of procreation, and as many problems as there may be still to solve, it is nevertheless the reward of modern natural science to have divested this process of the mystery with which it has until very recently been clothed, and to have proved it as belonging to the list of purely material organic processes.

"The nature of fructification rests essentially upon the truth that the male procreative cell becomes *intimately blended* with the female amœba-like ovule. By this means, the ovule is, in the first place, incited to further development; and, secondly, it induces the transmission to the child of the hereditary qualities of *both parents.* The male procreative cell entails upon the child the individual character of the father, and the female ovum transmits hereditarily to the new being the characteristics of the mother" (Haeckel).

This process is repeated in its entirety in the same manner, beginning from the very lowest organism, as soon as a distinction of sex has become established, until we reach the mammalia and the human race; and heredity occurs in each case as a result of the generative cells of the male transmitting the qualities of the father to the newly-created being, and those of the female the attributes of the mother. In this sense, the heredity is immediately consummated at the moment of union of both cells of procreation. Therefore, this power of transmission from both parents is entirely and wholly the same, and there is really, in fact, no special difference, more or less, in the contribution which the father and mother, through transmission, impart to the new being. All the physiological characteristics which are transmissible (at the most, those qualities excepted which relate to the organs of generation themselves) *may* originate equally from the father and from the mother. It is certainly a fact that, in every procreated individual, the share of both in the heredity is unequal. It may so happen that in a certain case the external form, height, color of the hair, and skin, may resemble more those of one parent, while the mental faculties and special talents or gifts more those of the other; but it must be acknowledged that, in general, both father and mother are equally capable and qualified to transmit each and every one of their physiological characteristics to their offspring.

These qualities are, as is well known, not at once perceptible in the new individual, and are for the most part not even present; still, it is undoubtedly true that we might recognize the new creature already in the fecundated ovule, or, possibly, not until after birth. A physiological peculiarity may then remain entirely latent during a more or less lengthened period of time, and in the human race throughout many years.

All that has thus far been said is equally true of pathological peculiarities, which are, by-the-way, separated from the physiological qualities by but a very narrow limit. In the same manner as the generative cells, separating themselves from the maternal or paternal organism, have the power of transmitting physiological qualities, the same cells, as an integrant part of an unhealthy parental organism, may, in like manner, have the power to communicate a disease to the being originating from the union of both cells. Consequently, we must here accept from the beginning the view that a disease, which can be in general transmitted in this way, must be in the same manner communicable from both the maternal and paternal side. In fact, experience teaches us that, in regard to this, there is absolutely no difference. We know that phthisis and scrofula, carcinoma, diseases of the blood, gout, mental diseases, and epilepsy—yes, even anomalies of single organs, such as faults of accommodation of the eyes and of special tissues, like the absence of pigment in albinismus, ichthyosis, etc.—may be transmitted in this manner, and that the unhealthy father, as well as the unhealthy mother, may transmit to the new individual, even after many years of latency, through the medium of the propagation-cells, each and every one of these diseases and anomalies, and the power required to develop the same.

Meanwhile, we must also state here positively that not *all* diseases are transmittable in this way; that the number of diseases in the above-mentioned list, which may be transmitted by the procreative cells, require only a limited number of others to render it complete, and that the larger number of all other diseases cannot be inherited in this manner. This is not only the case in all acute diseases, but also in many that are chronic. In order to illustrate this negative assertion, and before discussing this question, we must have satisfactorily proved to ourselves everything in relation to the father. No one would think that a man, suffering, at the time procreation was effected, from rheumatism, intermittent fever, scurvy, Bright's disease, etc., could in any way communicate either of these diseases to his offspring. This holds good of all acute, infectious diseases, and it is really unnecessary to say that a transmission of typhus, variola, scarlatina, etc., from the father to the child, by means of the semen, does not occur. If, then, this is the case, so is also to be rejected that which is analogous in relation to these affections, viz., ovular transmission on the part of the mother, which we have found in all respects to be identical with that of the spermatic on the part of the father.

The analogy in the share of parental heredity is only a complete one at the moment of union of both procreative cells. So soon as this union is effected, the analogy ceases. The paternal influence is concluded at this moment, but the united cells (the fecundated ovum), at least in the higher animals and in the human race, enter now into a new relation with the maternal organism, which continues, according to the further development of the new existence in the different animals, throughout a different period of time. It is now our task to discuss the influence which the mother may have upon the fecundated and developing ovum during pregnancy.

The mother supplies the fœtus with the material for its further development, through the utero-fetal interchange of secretions; there are established an endosmosis and exosmosis of fluids and gases between the rapidly-growing circulation of the fœtus and the vascular system of the mother, and this new being, created as a result of the act of procreation (or uniting of the cells), employs this material for the evolution of those physiological and, eventually also, pathological features or peculiarities which it has inherited from its parents through the agency of both these cell-forms. Can, now, the mother communicate to the newly-developing individual, by means of the utero-fetal and, later, of the placental circulation, any one of those qualities which this being might receive through the medium of the cell of procreation? Can she transmit to it a bodily or mental faculty, or the developmental capacity for the same? There is nothing which could lead us to such a conclusion. She can, through the adoption of a rich, nutritious diet, promote the development of the bodily capacities imparted at the time of procreation; or, through a scanty nutrition, she may hinder their development; but, of heredity, in the sense in which we have thought of it, viz., in the union of the sperm-cell with the ovum, there can be no question.

This does not, however, exclude the fact that the transmission of a disease from the mother to the developing fœtus may take place through the placental circulation; exactly resembling the effect produced upon the fœtus by the administration of a mineral or vegetable poison to the mother; and this is especially the case regarding several alkaloids. In fact, such a transmission is demonstrated in the acute exanthemata, especially in variola, and also in scarlet fever and measles; and it is further, to say the least, theoretically conceivable in relation to the remaining acute infectious diseases, for example, typhus, although this has not yet been positively observed.

It is manifest, how widely different this transmission of a disease to the fœtus during pregnancy is, from the heredity in a more contracted sense, that is, transmission through the medium of the semen or germ-cell. While, in the last case, the parental organism gives, as a part of its own being, the germ of the disease to the procreating cell, so, in the other case, a fœtus, the result of a perfectly healthy conception, may, in the course of its intra-uterine development, frequently but a short time before birth, become diseased; for the reason that the endosmosing fluids and gases passing through the placenta may communicate a poison which affects it, and requires probably the same period of incubation as if the poison were incorporated into the being after birth, say through the atmosphere.

The transmission of a disease to the child unborn is, consequently—in order to sum up the above—possible in two ways:

Upon the one hand, through the semen or ovum, of equal importance in both parents—*heredity in a proper sense.*

On the other hand, through the passage of a poison from the maternal to the fetal circulation—*infectio intra uterum.*

If we now apply the conclusions arrived at in this general discussion, as regards the question of the heredity of syphilis, there arise at once the following noteworthy points:

If syphilis be transmitted at the time of conception, the cell of procreation is consequently already imbued with the syphilitic poison; and thus both father and mother can transmit syphilis to their offspring in an entirely analogous manner, either the one or the other, or else both at the same time (such as would likely be the case in tuberculous parents).

Should the placental circulation be the medium of transmission, the originally healthy fœtus would be inoculated *intra uterum*, and the mother, therefore, would be the only and original source of the hereditary syphilis, the father having absolutely no connection with the disease of the child; while it is entirely immaterial to the child whether the mother has acquired syphilis from the father or from any other source.

Still a third form is certainly to be considered, viz., whether both modes of infection are not possible. In relation to this opinion, there are presented very important considerations.

In the first place, such an alternating inheritance of a disease would stand entirely alone in all pathology. There is no disease which can be inherited through procreation, and which at the same time can be transmitted to the fœtus by means of intra-uterine infection.

Much more important is the consideration that it is impossible for two processes, which differ so greatly one from the other, to produce the same effects. This effect is, however, not simply a syphilitic inoculation of the child, but an entirely peculiar affection, which stamps its seal on the new being from conception, alters its development and growth in the most thorough manner, and, with acquired syphilis, that is, with that disease which arises from the effect of the syphilitic poison upon a previously healthy individual, is not only not identical, but, on the contrary, differs from it in the most decided way. These differences do not depend in any way upon the susceptibility of the infantile organism, because, if a healthy child becomes inoculated with syphilis shortly after birth, its illness differs in no way, although developing in a child but a few weeks old, from the syphilis of adults; but a great difference is perceptible between its condition and the *inherited* syphilis of another child of the same age.

It is not here the place to discuss at length the fundamental distinction between acquired and hereditary syphilis, for the reason that this will be apparent as a result of the exhaustive description of the latter, which we propose to enter upon. We will now, in a brief manner, state preliminarily, several of the most striking differences.

1. The early development of the deeply seated visceral lesions, which *may precede* the eruptions upon the skin by several months, and their beginning, especially gummy growths, which have already been observed in an advanced stage of retrogressive metamorphosis in premature births of six months, and which we must necessarily consider to have originated in the earliest months of fetal life.

2. The highly characteristic affection of the calcifying cartilages and growing bones, at the union of the epiphyses with the diaphyses, with which, in the multiplicity of their points of development and premature (often intra-uterine) commencement, there is absolutely nothing to be found analogous in acquired syphilis.

3. The diffuse syphilitic infiltration of the skin, especially in the palms of the hands and on the soles of the feet, then on the face, and most of the remaining portions of the skin, which is never observed in acquired syphilis either in childhood or at a later period, but which imparts its characteristic stamp to hereditary syphilis, peculiarly noticeable even upon slight examination.

4. The very frequent occurrence of vesicular syphilides, particularly in the more severely affected children, which, by the way, are not always entirely absent in acquired syphilis, but which at the same time are exceedingly rare, and have never been described as occurring in the acquired syphilis of childhood.

5. The prodromic coryza of hereditary syphilis, etc.

Is it now imaginable that a disease of such peculiar character as hereditary syphilis would owe its existence to two such entirely heterogeneous processes? I believe that such a supposition is to be denied *in toto.* It seems much more probable that such a deeply-seated constitutional disorder can only have its origin by means of actual inheritance, and not through the transmission of the specific virus to a healthy embryo in an advanced stage of development, because such an intra-uterine infection cannot differ very greatly from an infection taking place immediately after birth.

Theoretically, we now arrive at the following preliminary conclusions: That the disease which we call hereditary syphilis can, logically speaking, only so arise that *either* the sources of procreation (spermatozoa or ovule) holding the syphilitic virus must, from the beginning, furnish the conditions for their development; *or*, that the fœtus, healthy from the time of conception, becomes infected with the poison contained within the maternal nutritive fluids; that the facultative effect of both heterogeneous processes, producing a similar final result, is very improbable; and that, finally, of both these modes of origin of the inheritance of syphilis, the first, viz., heredity in a true sense, has the greater real probability.

To begin with, it is scarcely necessary to say here, explicitly, that the theoretical discussions so far given could or should have any other object than to render possible the elucidation of this perplexing question, and that a definite conclusion can only be reached by observations and experience—in a word, through actual facts. We are, then, directly, through theoretical reasoning, placed in the advantageous position to turn to account in practice two positive and exact questions, the affirmation or negation of which must settle in a definite manner the theory of heredity. These questions are simply the following:

Can a non-syphilitic mother give birth to a syphilitic child?

Can syphilis, acquired by the mother during the period of pregnancy, be transmitted to a fœtus non-syphilitic at the time of conception?

I propose now, from my own personal experience, and the impartial judgment of other investigations, to discuss fully, and finally to answer, these two questions. It will not be amiss, however, first to say a few words upon the method of my observations.

By far the most important portion of my material for study was presented in the ambulatorium of the first public hospital for children, in which there were annually about four thousand sick children, the number of new cases of hereditary syphilis being thirty to forty yearly. The policlinical method of observation, a materially deficient one in most other diseases, and of less value than the clinical, offers, especially for our purpose, important advantages. This method of study does not confine itself alone to the diseased individual, but includes, also, in the course of time (together with the necessary care and patience), both parents, as well as the brothers and sisters, in ascending and descending line. When I first designed the plan of this work, about four years ago, I took from the records of the last few years, commencing from 1867, the names of all children with a diagnosis of hereditary syphilis, and placed them in an alphabetical register; by which means the individual names became easy of recollection to me. Since then, I have recorded all new cases bearing any relation to this subject in the most precise and complete manner, and followed them up through the agency of the register. I was thus frequently placed in a position to recognize children treated many years previously, as well as their brothers and sisters, both older and younger, and to modify, confirm, and complete their previous histories. I also succeeded in many cases by patiently waiting, by gradually becoming confidentially acquainted with all the family affairs, and retaining the continually increasing confidence of the parents, combined necessarily with a many years' objective observation of the single members of the family, in bringing to light the private details, origin, and heredity of the disease, which, even by repeated questioning and urging, remain for the most part entirely unobtainable. In this manner, I became possessed of the histories of one hundred and nineteen syphilitic families, with a complete record of all births, and, even if all doubtful points are not removed from a certain number, I succeeded, nevertheless, in obtaining, in the majority of the cases, everything necessary to render them precise.

In order to complete and control my work still further, I have undertaken within the last few years to render serviceable to my purpose, if even in a limited way, the invaluable material which may be studied in reference to our subject in both syphilitic divisions of the general hospital, in the three departments of the lying-in institute, and in the orphan asylum. This undertaking, owing to certain peculiar surroundings, is one of much difficulty.

The connection between these various institutions is a very slight one, and it is, notwithstanding the complaisance of the attending physicians, only possible, after a great amount of patience, trouble, and time, to follow a case through all these phases. In spite of all this, I was successful with a sufficient number of cases, and these same investigations were a most important addition to my material.

Among the innumerable cases described by the various authors which I have read in relation to this subject, I have only appropriated those which are given throughout objectively and clearly; while those reports in which the biassed opinions of the writer are adhered to I have made use of only with the greatest caution, or have paid no attention to whatever.

(*To be continued.*)

Clinical Records from Private and Hospital Practice.

I.—*Case of Single Uterus with Double Vagina.* By Stephen Smith Burt, M. D., House-Physician, Roosevelt Hospital.

We have in the Uterine Department of the Roosevelt Hospital, service of Dr. Watts, a case presenting anomalies of interest to the profession, both on account of its comparative rarity and of the peculiar consequences of this particular deviation from the normal anatomical relation. We are told that, from an arrest in the development of the ducts of Müller, different degrees of abnormal formation result, according to the stage in which it takes place. The uterus and vagina may be absent, or may be only rudimentary. There may be a bifid uterus with a single vagina, a double uterus and vagina, etc. Courty,[1] not including the hymen, speaks of a transverse vaginal septum, complete, incomplete, and annulare; a longitudinal septum separating a right from a left vagina (double vagina), one of these vaginæ being often imperforate, and giving rise to the retention of the secretions. This longitudinal division may be complete or incomplete. Either one or the other of these anomalies coexists with a bifid uterus and its varieties, or there may be (Maunoir) a simple uterus. According to Courty, the coexistence of a longitudinal septum in the vagina with a simple uterus is very rare, only fifteen cases being known to him; four cases of longitudinal septum separating the vagina into two cavities, an anterior and a posterior, have been reported.

The following case is one in which a longitudinal septum completely separates the vagina into two secondary cavities, a right and a left vagina, with apparently but one uterus, certainly but one os uteri:

Mary S., aged twenty-seven; American born; married; occupation a domestic. Admitted to the hospital November 22, 1876. Patient first menstruated during her fifteenth year, menstruation being regular in recurrence; duration three days; amount normal; painless up to one year after her marriage, which took place at the age of twenty-two. Has never been pregnant. Her general health had been very good up to the second year of her married life, four years ago, at which time her menses, which had come on in the usual manner, became suppressed from exposure to cold. "Inflammation of the bowels" set in, causing an illness of about two weeks. The following menstrual period was ushered in with more than usual constitutional disturbances—severe headache, chilliness, pain in the back and over the pubes, with much nervous depression; passed no clots, but these symptoms abated somewhat on the appearance of the discharge. Each successive month has been accompanied by this dysmenorrhœa. Has had a slight leucorrhœa for the past two months only.

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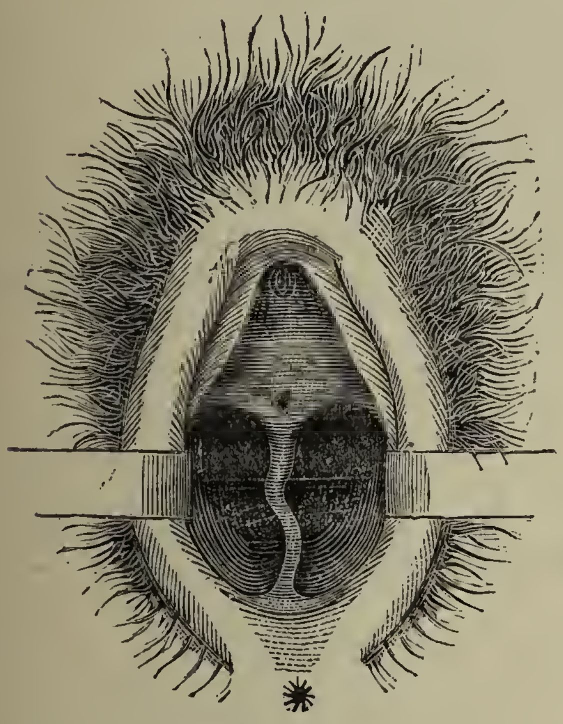
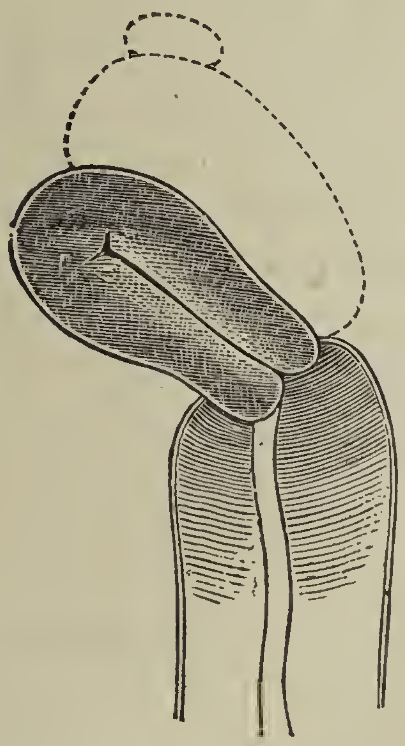
[1] A. Courty, "Traité pratique des Maladies de l'Utérus et des ses Annexes," Paris, 1870, p. 89.

It is of the painful menstruation that she complains chiefly, though she has been very desirous of offspring, and hopes that treatment will remove the cause of her sterility. Coition has been attended from the beginning with some annoyance, more or less pain to the patient, and difficulty of intromission to the husband.

Physical Examination.—Patient placed upon her back, with legs flexed. Mons veneris and labia well developed, clitoris normal, meatus and caruncle large. Remains of a hymen common to both vaginæ. Inserting the index-finger, it is inclined somewhat to the right (with respect to the patient's position), and passes into what seems to be the normal vaginal canal, with a portion of the uterus at the end. In introducing a medium-sized cylindrical speculum, the vaginal wall appears healthy; no os can be seen. Placing the patient in Sims's position, a septum is seen, which extends in a slanting direction from the right side of the cervix about one quarter of an inch to the right of the os all the way down in the median line to the ostium vaginæ, making two distinct canals with no communication. The left canal, slightly larger than the right, is healthy in appearance, with a small cervix at the end; os round, and somewhat less than normal in calibre. Sound passes, with an inclination to the right, to the depth of





two inches and a half. Cervical canal admits a No. 1 and No. 2 dilator with ease, No. 3 with difficulty.

December 9th.—Patient anæsthetized. Rectal examination. Drs. Watts, Mason, and house-staff, present.

The uterus is felt inclined to the right side. On the left of the uterus, closely attached to and movable with it, is a tumor somewhat larger than it, and on the top of this is a small almond-shaped projection, supposed to be the left ovary. A depression is felt between the uterus and this tumor, both in front and behind, and it gives the impression of a second uterine body; but from the history of previous inflammation, and from the fact that two distinct and separate cornua cannot be felt, it is considered to be an exudation in the left broad ligament. No opening is found in the uterus other than the one leading from the left vagina. On repeated insertion of the sound, it takes always the same direction.

The sterility of which the patient complains is explained by the inclination that the septum gives always to the right vagina, or *cul-de-sac.*

21*st.*—Patient, by invitation of Dr. Watts, was examined by Drs. Noeggerath and Mundé, who think the tumor undoubtedly an inflammatory product. Dr. Noeggerath also believes the small tumor on the upper portion of the mass to be the left ovary in a state of degeneration, and thinks the sterility is caused by this degeneration, together with the acrid discharge; but does not explain the cause of the sterility previous to the inflammation and leucorrhœa.

Patient is now undergoing a course of gradual dilatation of the cervix uteri.

Notes of Hospital Practice.

PRESBYTERIAN HOSPITAL.

Antiseptic Surgery.—Since the visit of Mr. Lister to this country, considerable interest has been aroused at the different hospitals in regard to the immediate and after treatment of cases operated on. The method proposed by him is to have the operation take place in a carbolized atmosphere, caused by atomizing an aqueous solution of the acid of five per cent. strength. The atomizing instrument is similar in principle to that used in diseases of the throat, but much larger, and situated so as to throw the spray upon the site of operation. After the necessary operative procedures have been finished, a protective, or, in other words, a sheet of muslin soaked in carbolic acid, is placed upon the wound; above this four layers of prepared gauze are superimposed, and the whole covered with a sheet of oil-silk. Two additional layers of prepared gauze are added on the outside, and the complete dressing retained in position by bandages or adhesive plaster. All of the instruments are dipped in carbolized oil previous to being used. The dressing should be removed every day or every other day, and fresh layers reapplied. The spray is continued during the operation and up to the time that the protective of muslin is applied; it is used also every time the wound is being dressed. The whole method finds favor with the hospital-surgeons, though from the results thus far it would seem not to offer any special advantage over the old methods when carried out in a careful and cleanly manner. The following cases have been operated on in this hospital, and have been under the care of the house-surgeon, Dr. J. A. Van Houten:

Amputation of the Thigh.—This case has been recently reported by Dr. L. A. Stimpson, and healed by first intention.

Cold-Abscess of the Back.—A patient had a cold-abscess of the back of two years' duration. No disease of the vertebræ or other bones could be discovered as a cause. The abscess was opened under the spray and dressed in the manner indicated. After three weeks all discharge had nearly ceased.

Fatty Tumor of the Back.—The tumor measured six inches in one direction by four in another. It was removed, and the wound dressed every other day; union took place by first intention. The patient left the hospital within a week.

Compound Comminuted Fracture of the Bones of the Hand.—A good result followed the antiseptic dressing.

Redundant Scrotum and Varicocele.—The scrotum was amputated in the usual way, and union took place by first intention along the greater part of the wound.

Buboes.—Several buboes were opened and treated by the antiseptic method. The results were not such as to indicate any particular benefit to be derived from the proposed system in these cases, though they all did well.

Cerebro-Spinal Meningitis, the Result of an Abscess opening into the Spinal Canal.—An excessively rare and interesting case of cerebro-spinal meningitis occurred recently in this hospital, and resulted from the penetration of the spinal canal by an abscess situated in the lumbar region. The history of the case was as follows: A man entered the hospital, suffering from an abscess situated near the right sacro-iliac synchondrosis. There were no special symptoms complained of, other than lassitude and weariness. The abscess had been noticed for about two years, and had been opened at different times; A few days after being admitted to the wards, the abscess was laid open, and shortly afterward symptoms of spinal and cerebral meningitis developed themselves. The cerebral meningitis followed so closely on the spinal that it might be said to be nearly coincident. Death took place forty-eight hours after the seizure. At the autopsy a deposit of lymph and pus was found over the convexity of the anterior lobes of the brain. The anterior and posterior surfaces of the spinal cord were found deeply congested, and covered also with the same products of inflammation.

On examining the abscess it was found to be situated in the vicinity of the third and fourth sacral vertebræ. On each side of the sacral vertebræ was found a large cancerous mass, which evidently had been the cause of the abscess. The most interesting element of the autopsy was found to exist in the last lumbar vertebra. In the middle of the body of that vertebra there was found an opening which communicated between the abscess and the spinal canal. This opening was sufficiently large to admit a No. 10 catheter and allowed of the free passage of the contents of the abscess into the spinal canal. A point of interest was that the accident took place after the abscess had been freely opened.

BELLEVUE HOSPITAL.

Stellate Fracture of Skull; Compression of Brain; Trephining.—A man entered the hospital in a comatose state, suffering from compression. The history that could be obtained was to the effect that he had fallen on the ice. There were no external signs of injury beyond a slight ecchymosis over the left eye. The left pupil was dilated, but there was no paralysis of the face. There was, however, complete hemiplegia on the left side. The breathing was stertorous. He was seen by Dr. Stephen Smith a few hours after admission, and at his suggestion the operation of trephining was performed. An incision was made through the skin over the right parietal protuberance, and there was then found a stellate fracture. After the button of bone was removed, a clot was discovered, which proved, on being extracted, to measure an inch and a half in thickness. The cavity formed by the clot was then washed out with warm water. No improvement took place in the hemiplegia, and the patient died within twelve hours. At the autopsy, a linear fracture was found to extend from the temporal fossa to the lambdoidal suture. Another linear fracture began at the middle of the foregoing and passed down to the squamous suture, making in all a stellate fracture at the protuberance of the right parietal bone. An extravasation, with laceration of the brain-tissue, was detected below the left anterior lobe, also below the cerebellum. The compression of the brain caused by the clot removed after trephining was found to continue at the autopsy.

Concussion of the Brain.—A man was taken into the hospital suffering from concussion, which was caused by a fall on the pavement. There was no paralysis, and the pupils, at first contracted, became subsequently dilated. The symptoms continued without improvement for two days, and at the end of that time he was bled to the extent of seven ounces. The effect of the bleeding was simply to reduce the pulse, without causing any change in his mental condition. During the twenty-four hours subsequent to his admission to hospital he had four convulsions, but none afterward. There was no improvement for three weeks, but at the end of that time complete consciousness was restored, and the patient began to do well. There was no meningitis or cerebritis following the injury.

Gunshot Fracture of the Femur; Death.—An interesting case of gunshot fracture of the femur was admitted to the hospital recently, which unfortunately terminated fatally after amputation of the thigh. The ball struck the femur between the middle and lower third, and caused the usual form of longitudinal fracture. The condition of the patient after the injury was good, there being no shock. After a consultation, it was decided to make an exploratory operation, and, if the bone was not shattered, to try and save the limb. When this exploratory examination was made, the femur was found to be comminuted, and it was deemed advisable to amputate. The operation was performed at the upper third of the thigh, under the influence of the antiseptic spray. After the operation the patient did badly, and died within twenty-six hours. When the femur was examined it was found to be extensively comminuted, but the fracture did not extend into the joint.

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 27, 1876.

Dr. C. K. Briddon, President.

Report on Specimens.—Dr. Heitzman had examined the specimen presented by Dr. Sayre at the last meeting, and found that the tissue covering the head of the bone was true cartilage. Dr. Heitzman reported a similar case which had been operated on by Billroth, of Vienna, where true cartilage formed on the cut section of the bone. Dr. Heitzman had examined the foreign body, supposed to be a plum-stone, which was found in the specimen of the appendix vermiformis presented by Dr. Briddon. The foreign body had for its nucleus some of the grains of a raspberry, and also crystals of the magnesian phosphate and mucous corpuscles.

Popliteal Aneurism.—Dr. Erskine Mason presented a case of popliteal aneurism which he had operated on at the Colored Home. The patient was a man sixty-four years of age, who entered the institution May 10, 1876. He had received an injury to the knee several months before, while jumping. When examined after admission, the aneurism in the popliteal space was readily detected. There was no pulsation in the posterior tibial. The femoral artery was tied in Scarpa's space on May 15th. On June 14th blebs appeared on the foot. After a line of demarkation had formed around the ankle, amputation was performed. The patient died on the eighth day after the operation, from exhaustion.

Tumor in the Popliteal Space simulating Aneurism.—A man aged twenty-four entered the service of Dr. Mason at Roosevelt Hospital, on March 18th, and presented a pulsating tumor in the popliteal region. This tumor measured two inches in one direction, by two and a half in the other, and presented all the evidences of popliteal aneurism. There was a harsh *bruit* discoverable, which ceased on compression of the femoral artery. The temperature of the affected leg was lower than that on the opposite side. There was slight pulsation in the posterior tibial. The diagnosis of popliteal aneurism was made by Dr. Mason, and confirmed by all the surgeons who examined the case. On March 17th an attempt was made to treat the case by flexion of the leg. Esmarch's bandage was afterward applied, but the pain was so severe that it was removed. Compression was subsequently attempted by relays of medical students; and, finally, a compression was applied which only slightly diminished the size of the tumor. The femoral artery was tied on March 21st, and subsequently all pulsation ceased, and for a time the patient did well. Six days after ligation had been performed, deep-seated and throbbing pain appeared in the knee-joint. The joint became red and inflamed, and it was then supposed that suppuration was going on in the sac.

On May 1st Dr. R. F. Weir took charge of the patient, when fluctuation was readily made out. It was then noticed that the ganglia in the groin were enlarged.

On June 22d amputation of the thigh was performed. The patient died of phthisis August 5th.

The suspected aneurism was found to be a tumor involving the cancellated tissue of the femur.

It was examined by Dr. Delafield, who found it to be a sarcoma of the large-celled variety.

Tumor of the Labium.—Dr. HINTON presented a specimen of tumor of the right labium, which he removed from a patient sixty-seven years of age. The patient noticed, about eight months ago, that a tumor began to develop on the right labium, and steadily increased in size till it was removed by Dr. Hinton. Externally it resembled epithelioma, and on section was firm and glistening, looking like boiled sago.

Subclavicular Dislocation of the Humerus, with Fracture of the Greater Tuberosity.—Dr. JOHN H. RIPLEY presented a rare specimen of unreduced dislocation of the humerus, with fracture of the greater tuberosity. The patient was fifty-two years of age, and died from phthisis two years after having received the injury. He consulted Dr. Ripley four weeks after the dislocation had occurred, and did not suspect that the shoulder was out of joint. Dr. Ripley's attention was directed to the seat of injury from the fact that the arm projected outward and backward, and on closer examination it was found that the shoulder was flattened, and marked by a prominent acromion. It was found, also, that a rounded prominence existed at the inner side of the coracoid process, and from the fact that this was continuous with the humerus, and rotated when the arm rotated, there could be little doubt that it was the head of the humerus.

The history of the case was to the effect that a direct injury to the shoulder had been received by a fall from a wagon. The patient was seen shortly afterward by a surgeon, who made out a dislocation of the humerus, and attempted reduction by extension and manipulation. It would seem, however, from the after-history of the case, that the head of the bone had never been put in its place, although the arm was bound to the side, and the forearm placed in a sling.

When Dr. Ripley examined the case he was of the opinion that he was dealing with an impacted fracture of the anatomical neck, and subclavicular dislocation. This opinion was formed because the head was in a line with the shaft. Dr. Sayre saw the case in consultation, and thought that there was a forward dislocation of the humerus, and fracture of a portion of the head of the scapula. Reduction of the dislocation was not attempted, and in time the patient regained the use of the arm sufficiently to raise it to an horizontal position. Two years subsequently death took place from phthisis, and at the *post-mortem* examination it was found that the head of the bone rested in a new glenoid cavity, formed between the first and second ribs, and immediately to the inner side of the coracoid process. The greater tuberosity had been longitudinally fractured, and had lengthened and united at a right angle. It articulated with the under surface of the coracoid process.

This union at a right angle of an elongated greater tuberosity was the result of the opposing action of two sets of muscles separating the tuberosity from the head—one set drawing the humerus inward on the chest, the other set attached to the scapula, and drawing the tuberosity directly outward.

Dr. Heitzman reported that the fecal matter which had been recently presented before the Society proved to be made up of the tissues of some plant which had been eaten by the patient, and not sufficiently digested. Since these facts were made known, the patient had ceased to eat such an abundance of indigestible matter.

Dr. Briddon referred to the case of a patient who was in the habit of inserting pieces of glass into her bladder, and was cured of the practice by inserting a suture into the meatus urinarius.

Enlarged Skull.—Dr. Briddon presented, on behalf of Dr. John T. Metcalfe, the skull of a colored girl which measured twenty-five and three-fourth inches in its largest diameter. Ossification took place at seven years of age. It was found that the right coronal suture was anterior to the left. Dr. Metcalfe had received the specimen from Dr. Gettings, of South Carolina.

Stated Meeting, January 10, 1877.

Dr. C. K. Briddon, President.

Obscure Case of Popliteal Aneurism.—Dr. Henry B. Sands presented a specimen of popliteal aneurism, which was marked by great obscurity of symptoms, and, when studied in connection with the two cases presented by Dr. Erskine Mason at the last meeting of the Society, showed that the diagnosis of this form of aneurism is frequently difficult, and at times impossible.

The history of the case presented by Dr. Sands was as follows: A man aged forty-six entered Roosevelt Hospital suffering from a tumor of the right leg. He had been the round of other hospitals, and the opinion arrived at was that the patient suffered from a sarcomatous tumor. Treatment by compression had been practised fourteen years previously, for supposed popliteal aneurism. This was continued for nine weeks, and subsequently another tumor developed below the site of the original one. This increased from year to year, by an annual increment of an inch and a half in the circumference of the limb. Ten days before admission to Roosevelt Hospital he was seized with a rigor, and, on entering, a painful tumor on the leg was noticed, which extended down from the popliteal region. A careful examination was deferred for four days, on account of the depressed state of the patient. It was then found that the tumor was situated on the posterior and upper two-thirds of the leg. The measurements were as follows: Five inches above the ankle the circumference was five inches; six and a half inches above the ankle the girth was nineteen inches; at the upper third of the leg the measurement was twenty-three and a half inches. The size diminished gradually in the upward direction. The tumor was firm, smooth, and nodulated. That portion of the tumor which was at the lower part of the thigh was found to give evidences of fluctuation and pulsation. There was also a *bruit* heard with the stethoscope. On December 18th the mass broke in two places, and discharged a large amount of grumous blood, together with solid masses of blood-clots. Following this there was a subsidence of fluctuation and pulsation. Amputation of the thigh was performed, and thirteen days afterward the patient died. At the autopsy it was found that the tumor was an aneurism. At its upper part there was a solid mass, which was at first thought to be a neoplasm, but on more thorough examination it proved to be a blood-clot. The popliteal artery above the sac was obliterated, and it was a mystery how pulsation could be accounted for without communication being made out with arterial branches, and, moreover, without the mass being superimposed on an artery.

Fracture of the Pelvis; Difficulty of Diagnosis.—A man sixty-six years of age fell through a dumb-waiter, and injured the right hip. The opinion formed at the time was, that the patient received an impacted intracapsular fracture of the neck. The patient rallied from the shock, and in twelve hours began to vomit. This continued till death. It was noticed that a tumor, measuring two inches by one, was situated over the saphenous opening, and immediately below Poupart's ligament. There was no pain connected with it, and it had been there for twenty years. On the third day after the injury the temperature rose, and the usual symptoms of peritonitis developed themselves, which were followed by death. The case had been under the care of Dr. Levings, and Dr. Sands, who presented the specimen, saw it in consultation. He said that it was impossible, before death, to decide whether the tumor over the saphenous opening was, or was not, a femoral hernia, and whether or not the peritonitis was due to the supposed hernia. At the autopsy the mass was found to be an adipose tumor. It was discovered, also, that the head of the femur was driven through the acetabulum, causing fracture of the pelvis and peritonitis.

Diphtheria of the Bronchi.—Dr. Delafield presented the larynx, trachea, and bronchi, of a patient who suffered from diphtheria. The patient was a man aged forty-five, who for eight years had suffered from cough and expectoration. He entered hospital January 8th, and died on the following day. The breath was fetid, and resembled that of gangrene of the lungs. At the autopsy the bronchi, trachea, and larynx, were congested, and presented on their surface a diphtheritic membrane.

In answer to a question from Dr. J. Lewis Smith, Dr. Delafield said there was no obstruction to respiration.

Diphtheritic Croup.—Dr. J. Lewis Smith presented the heart, lungs, and trachea, of a patient who died at the New York Infant Asylum from diphtheria. The child was bottle-fed, and developed cough during last December. On January 1st the symptoms suddenly grew worse, dyspnœa coming on. No membrane could be discovered on the fauces, though there was, however, an increase of redness. Dr. Smith was of the opinion that the cause of obstruction to respiration was either pressure from an enlarged bronchial gland, or retro-pharyngeal abscess. The child died on January 3d, and it was found that there was a false membrane in the larynx and trachea. There were also evidences of catarrhal pneumonia and cheesy degeneration.

Some discussion took place on the subject of false membranes.

Dr. Satterthwaite was of opinion that there were no signs by which the membrane of so-called croup could be distinguished from that of diphtheria.

Bibliographical and Literary Notes.

Art. I.—*A Treatise on the Theory and Practice of Medicine.* By John Syer Bristowe, M. D., London, F. R. C. P., Physician to St. Thomas's Hospital, Joint Lecturer on Medicine at the School, Lecturer on General Pathology and on Physiology at St. Thomas's Hospital, etc. Edited, with Notes, by James H. Hutchinson, M. D., one of the Attending Physicians to the Pennsylvania Hospital, etc. Philadelphia: Henry C. Lea, 1876.

A critical examination of this work enables us to speak warmly in its praise. It has the merit of being well written. The style is concise, but lucid and interesting. The matter of a scientific treatise is of far greater importance than the manner. Nevertheless, good writing is desirable, even in medical literature. It facilitates study, for mental provender, like the food that nourishes the body, to be easily assimilated must be agreeably served.

But excellence of style is not Dr. Bristowe's sole nor indeed his chief merit. The whole book bears the marks of untiring industry, and a determination to treat with thoroughness each subject.

Like most treatises on theory and practice, it is divided into two parts. Part I. treats of general and Part II. of special pathology. In preparing both parts the author has availed himself of the latest contributions to medical science, and these, together with the most recent advances made in the various branches of practical medicine included in the work, are fully represented in its pages.

Part I. may be characterized as an exhaustive summary of existing pathological knowledge. It is replete with valuable information hardly to be found elsewhere within the compass of a single volume.

The busy practitioner, to whom economy of time and labor is a necessity, but who wishes to keep abreast with the progress which pathological science has made during the last few years, has only to familiarize himself with this portion of Dr. Bristowe's admirable treatise.

Part II. fairly reflects the present condition of practical medicine. The sections on diagnosis are particularly good. Dr. Bristowe excels in the difficult art of medical description. His portraitures of disease are drawn by a master's hand. The student, or inexperienced practitioner, who has made himself thoroughly acquainted with these graphic delineations of morbid phenomena, will find little difficulty in recognizing their clinical types. Indeed, a manual of diagnosis might easily be compiled from this portion of the volume, which would compare favorably with any compendious treatise on that subject extant.

Dr. Bristowe is evidently skeptical as to the value of drugs in the treatment of most diseases. The physician who follows in his steps will not be led into the error of polypharmacy.

The author with whom Bristowe challenges comparison is Flint. His treatise is more comprehensive than the latter's, as it embraces several topics which Flint has purposely omitted, e. g., diseases of women and of the skin. These sections are excellent as digests, but the actual value of a medical work, whose aim is condensation, is not, as we think, materially enhanced by the cursory consideration of those branches which are by common consent relegated to specialists, and which have an extensive literature of their own. Why not with equal propriety introduce chapters on diseases of the eye and ear? But if Bristowe's work embraces a wider range of subjects than Flint's, the latter possesses the greater individuality. The former is less an original treatise than an able and exhaustive compilation. On the other hand, Flint's practice is not so much an epitome of medicine executed with skill and judgment by an accomplished physician and clever writer, as it is the embodiment of the author's own experience.

Dr. Bristowe has made the whole realm of practical and scientific medicine contribute to the formation of a compendium of physic, which has no superior, and perhaps no equal, in the English language; Dr. Flint presents to us the matured results of a lifetime spent in continuous and extensive clinical studies.

As an authority on pathology and diagnosis, Dr. Bristowe's work will perhaps rank higher than Flint's, while the latter will be oftener consulted, at least in this country, in the emergencies of practice. We have no disposition to undervalue Dr. Bristowe's labors. His work supplies a deficiency which the profession have generally felt. As a text-book for students and volume of reference for practitioners, and as an accurate and trustworthy guide to the rational treatment of disease, it deserves the highest commendation, and should have a place in every intelligent physician's library. We have not space to dwell upon the particular sections in each part with which we are most favorably impressed. We are, however, unwilling to close without directing attention to the article on "Tuberculosis," in Part I., and to the exceedingly able and perspicuous account of diseases of the nervous system in Part II.

Art. II.—*The Functions of the Brain.* By David Ferrier, M. D., F. R. S. New York: G. P. Putnam's Sons, 1876, pp. 323.

The subject treated of in this work has attracted more attention from physiologists during the six years which have elapsed since the publication of Fritsch and Hitzig than any other in physiology. The merit of having brought to light this new field of investigation belongs unquestionably to the German observers above named, and the book before us only claims to have followed out more extensively, and by a superior method, a path plainly pointed out before. In order to form a fair estimate of the value of any production, its claims to superiority must be studied alongside of those made by the author of the competing production, and this task is made easy for us when we turn to the work of Hitzig (Berlin, 1874), modestly entitled "Untersuchungen über das Gehirn." Here we find a critical examination of Ferrier's methods and results, occupying fifty pages. We confess that we looked for something of the kind in the work we are reviewing, and, moreover, we find no reason given for this remarkable departure from what is customary under such circumstances. Surely, what the author wrote in 1873 ("West Riding Reports," vol. iii., p. 32), "Their researches in this direction were not carried very far. . . . Induction-currents they did not employ to any extent," etc., he has not applied to the extensive researches published by Hitzig in 1874 and subsequently, nor does he deny the assertion of Hitzig, that induction-currents were employed by him not less frequently than by Ferrier. A disposition to avoid controversy, and that with one who has shown him the way in which to walk, is apparent, and can only be excused by want of space due to the multitude and importance of new facts to be presented. Ferrier first claims that the irritation from the induced current is more suitable for use in these experiments, and we infer that it is by the employment of this form of current that he has been able to discover so many centres in the brain, and that the same differ so much as to location from those observed by Hitzig. The latter, on the other hand, claims to have thoroughly tried induced currents, and, while not abandoning them, concluded that the current from the pile furnished fewer sources of error. It is difficult to measure the intensity of the former current, as we see by the marked differences in the distances between the coils in several of the experiments, and, when we note that Ferrier employed a current which could be borne on the tongue "without great discomfort," while Hitzig's current was hardly perceptible on the tongue, we must regard the latter as the more cautious experimenter. The controversy is not between Hitzig and Ferrier solely, but is also participated in by others, among whom we may cite Dupuy, Carville, and Duret. Dupuy was the first to establish the fact that the currents were diffused sufficiently to cause contractions in the facial muscles after the facial nerve had been severed; and, in spite of the unmerited neglect which his original views met with in Hitzig's work, no careful experimenter can do better than shun such a plain source of error by every possible means. Indeed, it seems to us more important to avoid current-diffusion than to hasten about discovering new centres. The function of a motor nerve may be excited by pinching or cutting it, and also by chemical means. That the functions of the brain can only be caused to act by the will and electricity throws *a priori* suspicion at once on this method of experimentation. If these so-called centres are irritable in the physiological sense, why should they require a current so strong as to be excluded from experiments on the motor nerve? We insist, therefore, on the great importance of becoming acquainted with the electrical phenomena so intimately that diffusion shall be excluded in future experiments. If we are to go on multiplying centres, let us at least be sure that the first one was found in strict accordance with scientific requirements. This may be difficult or impossible, but, without it, localization of function will remain what it now is, a dogma.

Dr. Ferrier's book appears in a very attractive form, is beautifully illustrated, and we regret that space limits us to the above brief notice of what seem to us to be its most interesting and important features.

ART. III.—*Contributions to Reparative Surgery.* By GURDON BUCK, M. D. Illustrated. New York: D. Appleton & Co., 1876, pp. 237.

THIS handy volume is divided into two parts, the first consisting of five chapters on the general principles of reparative surgery, the second of twenty-nine illustrative cases occurring in the hospital and private practice of its eminent author. The introductory chapters are severally devoted to instruction on the following points, viz.: "Transplantation of Skin," "Methods of Transfer," "Treatment of Raw Surfaces left to heal by Granulation," "Sutures and their Management," "Methods of Operation." On all these points the author gives valuable information and many serviceable hints derived from his own extensive experience. In Chapter I., for instance, on the transplantation of skin, he cautions against using cicatricial patches, and lays down as a condition of success that the section of skin to be transferred "should have its long axis correspond to the direction in which the arterial vessels are distributed," and that "the free extremity of the patch should point toward their destination." Again, in Chapter IV., careful instruction is given in sutures, their varieties and uses in reparative surgery, the author laying particular stress upon their right management as a condition of success. And, lastly, in the fifth chapter of the introductory part, the methods of operating are carefully detailed, and the reader is thus enabled to follow the succeeding chapters, in which the cases are detailed, with an intelligent and lively interest.

The illustrative cases occupy by far the larger part of the book. They are arranged in three groups, the first group comprising "Loss of Parts involving the Face, and resulting from Destructive Disease or Injury;" the second, "Congenital Defects from Arrest or Excess of Development;" and the third, "Cicatricial Contractions following Burns." Under this orderly arrangement the author traverses, we may say, the entire field of reparative surgery, furnishing a storehouse of information on the subject, from which the operator may draw with great advantage to himself and his patients.

Through the whole of this clear and able book two things are especially patent, viz., the author's conscientiousness and his transparent honesty. He is careful to the minutest detail; in nothing is he obscure or ambiguous; he says not a word for effect, and when some error in operative procedure has occurred—which is surprisingly seldom, considering the number and difficulties of the cases—it is frankly confessed, and its lesson wisely utilized in subsequent operations.

The numerous and genuine illustrations of the book are among its most instructive features. They give the aspect of the patients before operative procedure, at its principal stages, and years after, when, all the changes in cicatrices and flaps having ceased, the practical value of the operation can be fairly estimated.

ART. IV.—*The Ovulation Theory of Menstruation. Will it stand?* By A. REEVES JACKSON, A. M., M. D., Surgeon-in-Chief of the Woman's Hospital of the State of Illinois; Lecturer on the Diseases of Women in Rush Medical College, etc. (Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children*, October, 1876.)

THE author examines critically the various arguments regarding the ovulation theory of menstruation, and endeavors to show that they are far from conclusive, arriving at the following conclusions:

1. Ovulation and menstruation may each occur independently of the other.

2. Ovulation is the irregular but constant function of the ovaries, while menstruation is the regular rhythmical function of the uterus (Kesteven).

3. Ova are matured and discharged from the ovaries at all periods of female life, from early childhood to old age, both before puberty and after the menopause; hence, the one cannot be the sign of the other.

4. Menstruation is the consequence of conditions established by the structurally-completed uterus, and depends upon ovulation *only* for its origination.

5. The mucous membrane of the uterine body is the only

organ essentially concerned in the menstrual act; the uterus proper, the ovaries, Fallopian tubes, and vagina, have their functional activity increased, however, by receiving a share of the general pelvic congestion which accompanies the process.

6. The menstrual congestion of the pelvic organs—of the ovaries in particular—is, of all causes, the one most likely to determine the ovipont when a Graafian vesicle is sufficiently mature, and hence ovulation and menstruation are frequently concurrent.

7. The theory that would make menstruation dependent upon ovulation fails to account for the possible occurrence of pregnancy at any and all times between the menstrual periods; for multiparous conceptions; for the frequent persistence of menstruation after the removal of *both* ovaries; for the non-interference with menstrual regularity by removal of *one* ovary; and for the menstrual derangements and the shifting of menstrual periodicity from mental emotion.

8. All the known facts in regard to both ovulation and menstruation are consistent with the theory that, after the latter is once established, the two functions proceed side-by-side, but independently of each other, the former occurring at irregular and the latter at regular intervals; while, on the contrary, many of these facts are wholly inconsistent with the theory that assumes a necessary ovular maturity and rupture at each menstrual period.

ART. V.—*The Pathology and Treatment of Childbed. A Treatise for Physicians and Students.* By DR. F. WINCKEL, M. D. Translated by I. R. CHADWICK, M. D. Philadelphia: Henry C. Lea, 1876. Pp. 476.

THE interest which the subject of the puerperal diseases always possesses, and the renewed interest shown of late, make the placing of this valuable work within the reach of all English-speaking members of the profession at this present time of great importance.

Long known and appreciated by those familiar with the original, the book has exerted great influence as an exponent of the German school, and no doubt in its new shape its sphere will be extended. It gives in a careful manner the views of the distinguished writers and investigators who have done so much to throw light on the pathology and treatment of these obscure and always interesting affections. To criticise or even commend so well known a work at this late day would be rather out of place. Its reputation is sufficient guarantee for its excellence.

In his views regarding "so-called puerperal fever," Dr. Winckel commits himself to no exclusive theory, but takes a wide view of the whole subject. Admitting a great variety in the diseases which are generally grouped together under this head, his division of puerperal fever is as follows:

1. *Septicæmia simplex.* An infection of the blood by a putrid poison developed in the foul deposit secreted within the genitals: thus, for instance, in a case of thrombus of the vulva or vagina, sloughing of a retained portion of placenta, etc.

2. *Pyæmia simplex.* A blood-poisoning attributable to the absorption of pus, without metastatic deposits; as occurs in parametritis, peritonitis, etc.

3. *Pyæmia sive septico-pyæmia metastatica.* Suppuration, or putrid degeneration of the thrombi within the genital organs, or in their vicinity, with metastatic abscesses.

4. *Diphtheritis simplex genitalium.*

5. *Diphtheritis metastatica, myosis metastatica.*

The two latter affections are due to the presence of bacteria; the first to the absorption of *sepsin.*

This classification is not, however, followed in treating of the diseases; and we are obliged to look for examples under several different heads. There is no chapter, for instance, on septicæmia nor on diphtheria—instances of each are found under the headings, "Lesions of the Vagina," "Inflammation of the Genital Organs," etc. For pyæmia simplex we must look under the heads of the various inflammations. This makes the book somewhat confusing when looked at from our point of view; but it shows most clearly the author's disbelief in the existence of any specific disease called "puerperal fever," or any one set of lesions occurring with it. The whole subject is considered collectively in the chapter on "The Etiology of the So-called Puerperal Fever."

We cannot but urge the study of this book on all to whom these diseases are a subject of interest.

The book covers the whole range of the diseases met with in the lying-in room, and is much increased in interest and value by a large number of carefully-reported cases.

The translation is very well done into most acceptable English.

Art. VI.—*Clinical Studies: illustrated by Cases observed in Hospital and Private Practice.* By Sir John Rose Cormack, K. B., F. R. S. E., M. D., etc. 12mo, Vol. I., pp. viii.–548; Vol. II., vi.–579. Philadelphia: Lindsay & Blakiston, 1876.

Doubtless many who have heretofore had occasion to refer to the valuable papers of Dr. Cormack will be glad to see them republished in convenient form. The author has collected these, and, with the addition of a sufficient number of new articles, made a couple of fair-sized volumes. Among the previously-published material contained in the work are his essay on "Epidemic Fever," or relapsing fever, occupying about one-half of vol. i.; two or three essays on Cholera; "Non-Venereal Discharges," "Scarlatinal Nephritis," "Puerperal Convulsions," "Hernia of the Uterus," "Six Papers on Air in the Organs of Circulation," covering nearly one-third of vol. ii., besides some others. Among the articles recently written, and apparently intended expressly for this work, are three or four essays on diphtheria, "Paralytic Affections of Diphtheria, and other Diseases," "Concussion of the Brain," "General Paralysis, with Insanity," "Short Attacks of Insanity in Women," etc.; in all, twenty-five special articles.

The article on relapsing fever was first published in 1843, giving the profession an account of the epidemic as it occurred in Edinburgh at that time. It is now republished, with no additions other than a few corrections. The articles which have been published all have a record which will neither be enhanced nor depreciated by any word of praise or censure from us. Of those recently written we are enabled to speak very favorably.

Any one desiring to profit by the rich experience of the author, will be pleased with the perusal of these volumes; yet, we predict that most students and hurried practitioners, who wish to economize in their outlay for library purposes, will deem it more judicious to purchase complete treatises.

ART. VII.—*Public Health Reports and Papers, Vol. II. Presented at the Meetings of the American Public Health Association in the Years* 1874, 1875. *With an Abstract of the Record of Proceedings*, 1872–'75. 8vo, pp. viii.–552. New York: Hurd & Houghton, 1876.

THERE is so much being written upon medical topics that the practitioner needs to exercise considerable care in the selection of his reading-matter, in order to prevent the wasting of his time upon useless material. He cannot read everything, and must select the best, as far as possible.

The volume before us, as a work on sanitary science, is truly very valuable. We wish it could be placed before every member of the profession, as well as before the laity. It comprises some forty-three well-written articles, arranged in divisions, as follows:

1. "Public Health, Care, and General Physical Conditions relating to Hygiene."
2. "Educational, Social, and Physiological Subjects affecting Public Health."
3. "Sanitary Engineering: Drainage, Sewerage, and Cleansing."
4. "Hospitals: Sanitary Care of Contagious and Infectious Diseases."
5. "Reports upon Yellow Fever."
6. "Public Health Laws and Sanitary Administration."

We hardly feel at liberty to select topics for discussion from the many excellent articles before us, inasmuch as the reader can see at a glance the scope of the work. While there are some theoretical points on which we might entertain a different opinion from that expressed by the author, we nevertheless recommend the several articles to the perusal of all, as calculated to do good. We only wish that one section had been devoted to dietetics especially.

Art. VIII.—*The Electric Bath; its Medical Uses, Effects, and Appliance.* By Geo. M. Schweig, M. D. 12mo, pp. 134. New York: G. P. Putnam's Sons, 1877.

In this little volume Dr. Schweig describes the apparatus, mode of administering, physiological effects, and the general and special therapeutic application of the electric bath. It is claimed that by its employment many affections may be benefited or cured which are but little affected by the ordinary methods of applying electricity. He says, by a series of experiments, he has ascertained that water is a better conductor of electricity than the human body; a statement contrary to one expressed by Beard and Rockwell in their book. The author uses the electric bath for the purpose of introducing iron (tartrate of iron and ammonia) into the system, and for extracting lead by means of iodide of potassium in the water. He does not recommend the electric bath as a cure for every complaint, but rather as an additional means to be employed in certain cases. Several cases of intractable chorea, chronic rheumatism, nervous exhaustion, sleeplessness, etc., are reported, which seem to prove all that is claimed for the treatment. The volume is neatly published.

Art. IX.—*Report of the Board of Health of the City and Port of Philadelphia to the Mayor, for the Year* 1875. 8vo, pp. xvi.–351. Philadelphia: Printed by Order of the Board.

This report has been prepared at the expense of considerable labor, and includes many statistics of deaths, marriages, births, meteorological observations, etc. The birth-rate for 1875, including the still-born (eight hundred and twenty-four), exceeds the death-rate by about one hundred and twenty-eight. Aside from the statistics, which are useful for reference, we find but little which affords much instruction to the reader. Had the board directed their timely attention more determinedly toward some of the existing evils in Philadelphia, multitudes of cases of typhoid fever and numerous deaths therefrom might have been spared the visitors to the Centennial Exhibition. We notice some suggestions in the volume which, had they been carried out at an early day, might have saved a great deal of sickness. We could not, without a greater familiarity with the city, point out all the evils or their remedies; we are inclined to think, however, that defective sewerage is one of the great causes of the sickness during the past year, influenced somewhat by the long period of elevated temperature. In certain parts of the city we have seen filthy water standing in the gutters, and perceived unpleasant odors proceeding from the mouths of the sewers. Until sewers and drains are made separate this evil cannot be entirely abolished.

Art. X.—*The Medical Register for New England.* By Francis H. Brown, M. D., M. M. S. S. Boston: H. O. Houghton & Co. New York: Hurd & Houghton, 1877. Pp. 414.

A large amount of valuable information is contained in this volume, which has been so far enlarged as to embrace reliable reports of the officers and members of all the regular medical organizations throughout New England. It is also a complete directory of regular physicians, as far as such gentlemen have identified themselves with medical societies, but no questionable names have been admitted. The editor has performed his task with much ability, and his efforts will have a wholesome effect on those members of the profession who, from simple carelessness, neglect to do their duty by the local or other societies which have a right to their support and influence.

Books and Pamphlets Received.—Spiritualistic Madness. By L. T. Forbes Winslow, Lecturer on Mental Diseases, Charing-Cross Hospital, etc., etc. London: Baillière, Tindall & Cox, 1877. Pp. 38.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M. D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania; Physician to the Dispensary for Skin Diseases, Philadelphia; Author of "Atlas of Skin Diseases," etc. Philadelphia: J. B. Lippincott & Co., 1877. Pp. 618.

Chemical and Microscopical Analysis of the Urine in Health and Disease. Designed for Physicians and Students. By George B. Fowler, M. D., Visiting-Surgeon to the New York Dispensary, etc. Second edition, with Eighteen Illustrations. New York: G. P. Putnam's Sons, 1876.

A Note of Warning. Lessons to be learned from the Cholera Facts of the Past Year and from Recent Cholera Literature. By Ely McClellan, M. D., Surgeon United States Army. Reprinted from the *Richmond and Louisville Medical Journal* for December, 1876.

Transactions of the Thirty-first Annual Meeting of the Ohio State Medical Society, held at Put-in-Bay, June 20, 21, and 22, 1876. Cincinnati: A. H. Pounsford & Co., 1877.

Fracture of the Patella and Treatment by a New Method. By Henry O. Marcy, A. M., M. D. Reprinted from the *Boston Medical and Surgical Journal*, December 7, 1876.

Emmons's Annual Medical Directory of Regular Physicians in the State of Illinois, for the Year 1877. Chicago: R. R. McCabe & Co.

Twenty-first Annual Report of the Trustees of the State Lunatic Hospital at Northampton, Mass. October, 1876.

What is the Nature and Purpose of the Fever-Process in Human Bodies? By Z. Collins McElroy, M. D.

Clinical Cases of Hydroadipsia. By Z. Collins McElroy, M. D.

Reports on the Progress of Medicine.

Contributed by Drs. GEORGE R. CUTTER, EDWARD FRANKEL, and E. H. BRADFORD.

SURGERY.

Dislocation of the Astragalus.—M. Théophile Auger reports (*Bull. et Mém. de le Soc. de Chirurgie de Paris*, 1875) a case of complete dislocation, forward and outward, of the astragalus, in which reduction was effected by continuous traction applied for about ten minutes by means of rubber bands. The patient was a youth twenty-two years old, who had been overthrown by a barrel of oil which he was lowering into a cellar. No certain explanation could be given of the manner in which the dislocation was produced. When M. Auger reached the patient, five hours after the accident, unsuccessful efforts had been made by the internes of the hospital to effect a reduction.

The foot was in the position of forced adduction, varus. The skin on its dorsal surface was very tense, and through it could be seen the bony prominences of the astragalus, the head of which lay above and external to the cuboid, at a point corresponding nearly to the cuneo-cuboid articulation. Behind this was the superior articular surface of the astragalus, and by depressing the tissues behind the latter the anterior edge of the articular surface of the tibia could be felt. The inner edge of the calcaneum had slipped upward into the place of the astragalus so that the apex of the internal malleolus was buried in the soft parts. The external malleolus was prominent, and in front of it the skin was in danger of being perforated by the outer edge of the astragalus. The plantar surface of the foot was directed inward.

The patient was laid upon a bed, and counter-extension provided by means of a band passed between the thighs and attached to the head of the bed. Strips of adhesive plaster were placed in the figure-of-eight form about the heel and dorsal surface of the foot, crossing at the sole, at which point stout rubber tubes were fastened and carried thence to the crossbar at the foot of the bed. Their combined tension was estimated at from thirty to forty pounds. In about ten minutes the muscles were found to be relaxed, and then the astragalus was pushed into place with a slight effort.

A small superficial slough took place at the point where the skin had been stretched over the head of the astragalus, but had no untoward results. The patient recovered perfect use of the limb.

This case is especially valuable because this variety of dislocation is often considered irreducible, and its consequences are most serious, entailing removal of the displaced bone, either by surgical interference or by sloughing of the integument, suppuration of the joint, and caries of one or more of the tarsal bones, with a permanent infirmity even in comparatively favorable cases.

In the same volume (page 768) is recorded a case of sub-astragaloid dislocation in which reduction was effected almost by simple manipulation, but little force being used. It throws some light upon the pathology of these accidents, and enforces the lesson taught by the spontaneous reduction of Prof. Carmichael's dislocation after forcible traction by means of pulleys had been employed in vain.

In this variety the astragalus maintains its relations with the tibia and fibula, but the rest of the foot is carried backward, and rotated inward as in varus. The new method of reduction, which we owe to Dr. Bertin, is based upon the theory that the sharp posterior border of the astragalus becomes lodged in the groove in the upper surface of the calcaneum, and thus opposes an insurmountable obstacle to all attempts to draw the foot forward into place. Dr. Bertin accomplished reduction easily by forced dorsal flexion of the foot, after relaxing the muscles of the calf by flexing the leg upon the thigh. The effect of this flexion is to draw the posterior end of the calcaneum downward, and thus release the edge of the astragalus from the groove. As soon as this is effected the foot slips forward into place.

E. F.

On Neuralgia of Stumps.—Trelat and Cautaz (in the *Progrès Méd.*, April 8, 1876) report the case of a patient who had undergone numerous and varied operations for the relief of neuralgia in the stump. He was thirty-one years of age; had his leg amputated in 1869, for injury. A few days after his entrance into the hospital, a chancre appeared on his penis, which was followed by regular evolution of syphilis. On the twenty-eighth day, the wound being partly cicatrized, he made a misstep, and though the stump did not receive any shock, neuralgia commenced, and soon attained a frightful intensity. Antisyphilitic treatment had been instituted, but had no influence over the neuralgia. The cicatrix of the stump was excised; in 1870, section of the flexor tendons of the thigh was made, and later again excision of the cicatrix; then a partial resection of the tibia; electropuncture, acupuncture, narcotics, etc., were all tried in vain. In 1874, it was decided to perform neurectomy: three ccm. of the sciatic nerve were removed at the junction of the middle and lower portion of the thigh, but the neuralgia recurred. Then three ccm. of the saphenous nerve were removed, but the neuralgia persisted. At this time he came to Paris; before resorting to a more radical operation, the continued current was applied for some time, with very good results; but, after two or three months, the neuralgia reappeared, with less intensity, however. A large blister was then applied to the extremity of the stump, and since then (four months) the pains have not reappeared.—In the opinion of the authors, the case did not depend on neuromata, for neuralgias dependent on these are more frequent after amputations of the upper extremity. There was probably a neuritis conducted through the nerves to the spine, or the neuritis was peripheral without central reaction; the latter theory is supported by the fact of the efficacy of entirely local treatment, and the often spontaneous cure of such neuralgias after a more or less prolonged period.

E. F.

On the Influence of Syphilis in the Generation of Phthisis.—In view of the theory still upheld by many physicians, that tuberculosis never exists without being traceable to syphilis, Dr. Thoresen, of Christiania, publishes in the *Norsk Magazin for Laegevidenskaben*, fifth volume, 1875, three hundred and eighteen cases, whose complete history he gives much after the fashion of Prof. Boeck's book, "Recherches sur la Syphilis." In these three hundred and eighteen cases he meets with only sixteen of phthisis, and in all these cases either parents or grandparents have died of phthisis, most of them even before syphilis had come into the family. He maintains that syphilis attacks the nervous centres and bones *only*, in one case producing idiocy and paralysis, and caries and exhausting ulcers in the other, but *never* the lungs.

The tubercular and syphilitic virus are wholly and totally distinct, and never merge into one another. "If," he says, "a consumptive individual is attacked by primary syphilis, it is not the phthisis but the syphilis which manifests itself in aggravated forms in the same manner as it would if the patient were emaciated by some disease apart from phthisis."

He proves, satisfactorily to himself, and, if careful investigation will do it, to the world at large, that a syphilitic father rarely transplants the disease to his offspring, but that it is necessary for the mother to have been affected by syphilis at the same period of her life. The most dangerous period he deems to be that of pregnancy; yet, in many cases of syphilitic dyscrasia, he has seen healthy children born, who have remained healthy until they reached man's or woman's estate.

He mentions the case of a woman who suffered from syphilitic eruptions, and, on asking her why she would not get rid of them, she answered that she always got rid of them during pregnancy, but that the eruption reappeared after parturition; thus it would seem that the fœtus would have been the receptacle of the virus, yet all her children were well and hearty.

Again, a woman may bear several perfectly healthy children, and the fourth or fifth, as the case may be, may be affected by hereditary syphilis, or the first may become a victim to its ravages, whereas the remaining ones may be exempt.

He claims that in no case, which has come under his notice, is phthisis to be traced to syphilis, and feels certain that, when more attention shall be paid to this important subject, physicians will fully agree with him on the point. E. F.

Cerebral Anæmia following Operations on the Pleura.—At the Congress of Clermont (*Gaz. Méd. de Paris*, 36, 1876), M. Leudet read a paper so entitled, stating that he had observed several cases in which the operations of thoracentesis, or of empyema, or of even simple injections, into the pleura, had given rise to symptoms which could only be attributed to cerebral anæmia. One case, twenty-one years old, was taken with fever, preceded by chills and followed by side-stitch; two days after, pleuritic effusion was made out, which was treated by ordinary measures, but did not disappear. At the end of one month puncture was made with Reybaud's trocar. The operation was followed by expectoration, at first albuminous, and later, purulent. A second puncture gave issue to liquid slightly mixed with pus; and finally, several months after, the operation for empyema was performed, followed by washing out the pleura. During one of these washings, and after the tube had been introduced into the fistula, cerebral symptoms suddenly appeared, consisting in loss of speech and sight; these disappeared only very slowly. One month later similar symptoms set in after an injection: suffocation ensued, and the patient exclaimed that he should die were the operation continued. Instead of further injections, the author substituted an elastic drainage-tube, with no further phenomena.

Raynaud and Blackey have observed paralyses of the extremities after operations on the pleura, and these paralyses occurred as much on the healthy as on the diseased side. M. Leudet admits that an epileptogen zone exists in the pleura, which, when attacked, causes paralysis and convulsions. Several points of analogy exist in the tract of the nerves and muscles, and compression of the latter suffices to give rise to analogous symptoms. There are phenomena of cerebral anæmia, which can be excited by different pathological causes. M. Haulnoit agreed with the author, and observed that in making large injections there was danger of causing compression of the heart; furthermore, the water used in these injections having less density than the pus, could neither displace nor remove the latter, while on the other hand, with salt-water, which resembled pus as regards its density, the displacement and removal could be accomplished with facility. E. F.

Traumatic Lesions of the Urethra.—At a meeting of the Société de Chirurgie, of Paris, the mode of treatment of traumatic lesions of the urethra was discussed, and the views of some of the leading Parisian surgeons expressed. The text for the discussion was furnished by a paper by M. Cras on the subject, citing a case, and also a second paper by M. Notta. Both writers point out the differences of surgical authorities in regard to the treatment of such cases.

The seat of the rupture of the urethra, caused by direct violence, is usually the third or inferior portion of the perinæum; but in fractures of pelvis the urethra is torn usually at the membranous portion, and the seat of the lesion is, therefore, at the upper third of the perinæum. The canal is torn and falls (astraddle) across the middle part of the bulb, and is at first incomplete.

Troubles in micturition, hæmorrhage from the meatus, and a tumor in the perinæum, are the immediate symptoms of contused wounds of the urethra. The cases may be light, of moderate intensity, or severe. In the light cases, micturition is possible, but painful; there is a slight amount of discharge from the meatus, and there may be a tumor in the perinæum. A sound can be passed, and, unless septicæmic complications intervene, there is recovery. Surgical interference is not needed.

In cases of moderate intensity micturition is difficult and painful, there is abundant discharge of blood from the meatus, and there is a tumor in the perinæum. The catheter can sometimes be introduced if the curve permits its adherence to the upper wall of the urethra.

In severe cases there is complete retention of urine, the hæmorrhage from the meatus is abundant, there is a large tumor in the perinæum, catheterization is impossible, or very difficult. In these cases there is a difference of opinion in regard to treatment.

The methods recommended are: the catheter, puncture of the bladder, simple perineal incision, perineal incision with immediate insertion of a catheter in the posterior part of the urethra.

Catheterization is possible at times if the superior wall of the urethra can be followed (and it is rarely destroyed), but it is always difficult, and may, therefore, be dangerous; the catheter, without incision, does not prevent the stagnation and infiltration of urine. Guyon, Cras, Notta, and Verneuil Rochard, considered the use of the catheter under such circumstances as a dangerous practice, and one that should be condemned. M. Guyon advocates the immediate perineal incision, a search for the urethra, the insertion (through the meatus) of a catheter into the bladder, and the catheter to be left in. In a case where the simple perineal incision was alone used, there was on the next day retention, and the bladder was aspirated. The catheter, when inserted, does not cause any disturbance, and can be allowed to remain four or five days, after which catheterization is to be used.

Duplay advocates perineal incision in certain cases, but not in all. He has seen cases recover where the sound was used, when there was swelling in the perinæum, retention of urine and hæmorrhage.

Le Fort considers an incision in the perineal region a grave operation if that region is inflamed or infiltrated. Incision should not, therefore, be the only method of treatment of ruptures of the urethra. If there is a contusion of the urethra, with perineal tumefaction, but no retention or infiltration of urine, the sound should be tried. If there is retention, and the swelling in the perinæum is not too great, the sound is to be tried with caution. The bladder can be punctured and a catheter left in (*y laisser une sonde à demeure*), and, later, a sound introduced into the urethra. If there are great swelling of the perinæum and considerable infiltration of urine, an incision is necessary, but it is Le Fort's opinion that puncture of the bladder is less dangerous than the perineal incision.

M. Trélat, on the contrary, believes that perineal wounds heal readily, and therefore prefers incision to puncture. In cases of doubt he recommends perineal incision. If there is no urinary infiltration, an incision is not required, necessarily.—*Gaz. Hebd.*, December 22, 1876. E. H. B.

The So-called Organization of Thrombi.—Dr. Baumgarten, of Königsberg, has studied the formation of thrombi in the veins and arteries of the rabbit, by freeing the vessel from its connections over a distance of about one inch, and the subsequent application of two ligatures so as to suddenly cut it off from the general circulation. The result of his observations is as follows:

1. The so-called organization of thrombi occurs by two processes, which are completely independent of each other: *a*, by a cell-production starting from the endothelium of the vessel; *b*, by a granulation-tissue which penetrates from without at the points of ligation, and this granulation-tissue is alone the seat of the development of vessels.

2. The blood-coagulum plays no *rôle* in the organization: its only re-

mains are pigment-masses, scattered here and there. That this is the true condition is also proved by the fact that the process is developed in the same manner when measures are taken to completely remove the blood from the ligated portion of the vessel.—*Centralbl. f. med. Wiss.* and *Norsk Mag. f. Laegevidenskaben*, November, 1876. G. R. C.

Congenital Obliteration of the Posterior Orifices of the Nasal Fossæ.—M. Bitot recently showed before the Academy of Medicine at Paris a seven months' fœtus, in which the posterior nasal orifices were obliterated by the presence of two pieces of bone of a triangular shape. The upper borders of these bones were in contact with the sphenoid; the lower with the posterior border of the os quadratum or the horizontal portion of the palatine; the external borders touch the free border of the inner wing of the pterygoid; the internal borders were applied to each other, and a median fissure was formed.

M. Depaul referred to the case as rare, and as interfering with nursing when it is present.

M. Gosselin mentioned having seen, in a girl of eighteen, complete stoppage of one nostril, due to the presence of a hard, resisting surface in the back part of the nasal cavity, presumably bone.—*Gaz. Heb.*, September 1, 1876, p. 556. E. H. B.

Ignipuncture in Chronic Osteo-myelitis.—Prof. Theodore Kocher, of Bern, refers to the great frequency of chronic osteo-myelitis, and the importance of its early treatment in the prevention of fungous articular inflammations. After a careful and exhaustive discussion of the etiology and symptoms of the disease, Prof. Kocher speaks very highly of ignipuncture in its treatment. Contrary to the opinions of Richet and Juillard, he considers that this method is not only beneficial in cases of long duration, where the arthritis has assumed a fungous character, but that it is also indicated at the commencement period of the disease, when it acts as a prophylactic in the prevention of the fungous form. The important points of the paper are as follows:

1. Primary chronic osteo-myelitis occurs more frequently than was formerly supposed. Many a persistent pain after a trauma, or rheumatism of spontaneous origin, is due to this.

2. Localized in the articular extremity of the bone, it has a great etiological significance, in connection with chronic, and especially fungous articular inflammation, under which form it often occurs.

3. Its treatment should not be merely expectant (rest); on the contrary, a cure can only be obtained by causing either an inflammation analogous to the acute, traumatic, or by a radical removal of the diseased part or the whole limb.

4. The best results are afforded by ignipuncture, so long as there is only a simple inflammatory osteoporosis. When, on the contrary, suppuration, caseous degeneration, necrosis, or perforation outward, has occurred, the radical operation is indicated.

5. The early, active treatment of osteo-myelitis of the articular extremities prevents the occurrence of secondary arthritis, and cures it in its commencing stage.—*Sammlung kl. Vorträge* and *Norsk Mag. f. Laegevidenskaben*, November, 1876. G. R. C.

Treatment of Chronic Ulcerations with Sulphide of Carbon.—M. Paul Guillaumet thinks that the sulphide of carbon should hold an important place in the class of remedies employed in the local treatment of chronic, scrofulous, and syphilitic ulcerations, especially in those situated on the external genitals of the female. Encouraging results were obtained at the St. Lazare Hospital in vulvar esthiomenus, ulcerated gummata, simple chancres, and experience has shown that the employment of this remedy is devoid of danger. As regards the odor, which was long considered the obstacle against its employment, this can be almost covered by being distilled with one-half per cent. of corrosive sublimate and twenty per cent. of an inodorous fatty body; or it can be diluted by the addition of substances which will render the odor more bearable, such as essence of bitter almonds, essence of mirbane, in the proportion of 10 drops to 10 grammes of sulphide of carbon; Peruvian balsam in the proportion of 1 gramme to 30; iodine, tincture of iodine, and essence of peppermint. The following preparation appears to give the best results: ℞. Sulphide of carbon, 16 grammes; tincture of iodine, 4 grammes; essence of peppermint, 4 drops. M. Iodine, in the proportion of 1 gramme to 12 of sulphide of carbon, can also be employed advantageously.—*Gaz. Méd. de Paris*, 34, 1876.

E. F.

THEORY AND PRACTICE.

The Hypnotic Action of Lactic Acid and Lactate of Soda.—Jeruselimsky has tried the effect of these substances in animals, and in well and sick human beings. The experiments in animals (nine dogs and nine rabbits) gave no definite results, as these animals are not good subjects for the purpose. In himself, two healthy women, and three men, the author has obtained only moderate effects with doses varying from two drachms to a half-ounce. Lactic acid was administered in twenty-two cases of insomnia in the course of the most different diseases, but especially in hysteria, and the effect was incomplete in only a few cases. In most cases, quiet leep occurred a half to one hour after administration. The remedy was con- inued from two weeks to two and half a months (two to three times week- y). In combination with morphine, a much smaller quantity of the latter s required. Thus, an hysterical woman who had been taking as much as wo grains of morphine per day, slept five hours after taking one-half grain f morphine with one-half ounce lactate sodæ.—*Supplement to Med.-Chir. Centralblatt*, 1876.

E. F.

Salicylate of Soda as an Anæsthetic and Hypnotic.—Dr. Bode, in the *Central-Zeitung*, 1876, 61, observes that, while its temperature-depress- ng property is well known, and has been much discussed, no case has as et been published in which it has acted as a narcotic. Some time ago, hen administering the remedy by way of experiment in doses of two rammes, to reduce the high temperature in a case of mastitis, he noticed hat the headache and pains in the limbs disappeared soon after the first ose, though the temperature remained at the same height, and that the atient fell into a quiet sleep, which she had not enjoyed for several days. s this phenomenon in the same patient was repeated after every first dose the salicylate of soda, so that the patient herself praised its pleasant sed- ive effects, the author soon after tried the remedy in the same dose in a atient with rheumatic fever, who likewise complained of severe headache nd pains throughout the whole body. Here also the pains were relieved, nd the patient slept half an hour after administration, though the tem- erature (58.5 C.) remained the same. The patient awoke after several ours with slight pains, and took another dose, with the same beneficial fect. The very intelligent patient stated that the pains disappeared al- ost immediately after taking the medicine, and that she fell into a quiet eep. In the third case also, in which morphine and chloral failed, the dative action of this remedy was demonstrated; the patient, a lady of er sixty years, suffering for several months from an intermittent, very severe headache, which yielded to no remedies except transiently to injections of morphine. These latter finally also failed, as, in spite of the addition of atropine, they were followed by long-continued vomiting. As a last resort, the salicylate sodæ in half-teaspoonful doses was tried, with the former happy result. The pains ceased about half an hour after taking. The action of the remedy was so decided that the patient had full confidence in its power to afford relief. There was no fever in this case.—*Supplement to Med.-Chir. Centralblatt*, 1876. E. F.

Danger in the Administration of Salicylic Acid.—As the internal administration of salicylic acid in many diseases is very common at present, especially in acute articular rheumatism, Richardson (*France Médicale*, July 22, 1876) observes that given in larger doses it is by no means devoid of danger. He mentions a case in which 8.50 grammes of the acid had been taken within three days. The patient then exhibited much prostration, and considerable depression of temperature. The latter fell from 39° C. to 36.6° C.; the pulse became intermittent. Richardson has observed several similar cases. It is necessary, therefore, during the administration of this remedy to watch the pulse and temperature very carefully, and, in case the above effects are apparent, to resort, in case of necessity, to stimulants.—*Supplement to Med.-Chir. Centralblatt*, 1876. E. F.

On the Influence of Faradization of the Splenic Region on Tumors of the Spleen and Paroxysms of Intermittent Fever.—Dr. Skorczewsky (*W. med. Wchschr.*, 1876, 30 and 31) has investigated the influence of the electric current on paroxysms of intermittent fever in ten cases, but no definite results were obtained, because faradization was not attended with the same success in the different cases. In one case the paroxysm disappeared without a trace after the first faradization; in five cases the next paroxysm was milder, and then no other paroxysms occurred; in four cases the succeeding paroxysms were stronger, and in two of these the fever disappeared after the third paroxysm; in one case, after four sittings, the paroxysms were always severer, and treatment ceased, and in one case quinine was given. The influence of the induced current on splenic tumors with intermittent fever is almost identical with that on malarial tumors of the spleen without paroxysms. As a rule the tumor diminishes immediately after the application of the current, the spleen becomes painless, and the decrease either continues until the next day, or the spleen again enlarges; but, as a rule, the increase in twenty-four hours is not beyond that had previous to faradization. The most remarkable fact is that, during faradization, the type of the paroxysms undergoes a change; they anticipate, become duplicate, the tertian becomes quartan, and *vice versa.* Furthermore, the general condition of the patient undergoes a very favorable change, namely, improved appetite, general stimulation, and cheerfulness. Sometimes the tinnitus aurium returned, which the patient experienced a few hours after taking quinine. In one case, the amount of albumen in the urine became less, and in one case the dropsy disappeared markedly after faradization. Skorczewsky observed, further, that the number of white corpuscles not only increased with the intensity of the fever, but also, though in a slight degree, after the application of the electric current. Pigment-granules were also found, after faradization, in the blood, which before showed no black pigment.

Previous to as well as after faradization, the blood of malarial patients constantly showed the red blood-corpuscles disposed in different irregular lumps on the object-glass; after faradization they were always arranged in more or less regular rolls.—*Supplement to Med.-Chir. Centralblatt*, 1876. E. F.

On the Influence of Pleurisy on Hydatid Cysts.—On this subject a note by M. H. Petit was presented by Prof. Verneuil at the Congrès de Clermont (*Gaz. Méd.*, 36, 1876). Occasionally hydatids of the liver pass into the pleura, the lungs, and the bronchi. The author has observed three cases. The first individual had suffered for a long time from epigastric pains, and presented two tumors, one in the epigastrium, the other in the left hypochondrium. A pleurisy on the right side set in, and there was a diminution of the abdominal tumor. The pleurisy became purulent, aspiratory puncture was made, and a purulent hydatid cyst was discharged in a state of decomposition, and containing the *débris* of hydatids. The second case was that of a woman who had a globular tumor at the inferior portion of the liver for ten years; pleurisy supervened; pain and swelling of the tumor. No puncture was made, and after six months the pleurisy was cured and the tumor effaced. In the third case, that of a young woman of twenty-four years, in the enjoyment of excellent health, but having an abdominal tumor, a pleurisy occurred, which necessitated two aspiratory punctures. As the pleurisy disappeared, the cyst diminished in volume. M. Verneuil observed that pleurisy can exert an influence, not only on tumors of the same, but also on those of the opposite side. E. F.

Oil of the Aleuritis Triloba as a Purgative.—In the *Journal de Thérapeutique* is contained the *résumé* of an article by Dr. Oxamendi, on a good substitute for castor-oil, namely, the oil of the *Aleuritis triloba*, which at Ceylon is called Ketune-oil. It has the further advantage of not being disagreeable to take, having the flavor of the hazel-nut. An adult is easily purged with a dose of fifteen grammes. It is an excellent aperient, and its effects on the intestine are identical with those of castor-oil. About three hours are required for its action, which takes place without pains or colic. The author recommends the following mixture: ℞. Oil of aleuritis triloba, 15 grammes; white sugar, 15 grammes; gum-arabic and water, of each 12 grammes. M.

Good results have been obtained in rebellious cases of constipation and abdominal pains, by making frictions on the abdomen with the following liniment: ℞. Oil of aleuritis-nut, 15 grammes; tincture cantharidis, 12 grammes; carbonate of ammonia, 12 grammes. M.—*Gaz. Méd. de Paris*, 34, 1876. E. F.

Ammonia as an Antidote to Chloroform.—With the object of avoiding the deleterious effects of chloroform in individuals affected with disease of the heart, who cannot very well tolerate chloroform, Prof. Occhini describes a case (*Ann. Chim.*) in which he made a preliminary use of ammonia with great success. The inhalation of caustic ammonia was continued for ten minutes, or till it could be tolerated, and then the patient was chloroformed, and was enabled to undergo the operation of cystotomy for the extraction of a large calculus without suffering.—*Lo Sperimentale*, October, 1876. G. R. C.

Poisoning from Carbolic Acid taken internally.—M. Wiart reports the following case, which is interesting in connection with the cases of poisoning from the external application of carbolic acid:

Mdlle. X., forty-three years old, suffering from ascites, swallowed by mistake ten grammes of a strong solution of carbolic acid. Almost immediately afterward she was seized with convulsions, and there was a complete loss of consciousness; cold perspiration, imperceptible pulse, strong odor of carbolic acid in breath; lips, tongue, gums, and pharynx, covered with a white slough. The convulsive attacks continued an hour, but were not severe. Consciousness returned in an hour; there was great pain in the neck and stomach, and difficulty in swallowing even small quantities of milk; the mouth was filled with a thick saliva. There was vomiting, the vomitus being a white, creamy substance, smelling of carbolic acid; involuntary fecal discharges, not at all abnormal in appearance; but the urine, which was also voided involuntarily, left a stain on the linen resembling that made by dark-red wine.

In the evening the respiration was more easy; a few teaspoonfuls of liquid swallowed.

A comfortable night was passed after an injection of chloral, and the urine appeared normal.

In two days the patient recovered her normal condition, and in the eight months following suffered from nothing which could be attributed to the poisoning.—*L'Aimée Médicale*, October, 1876. E. H. B.

Hypodermic Injections of Potassium Bromide in Epilepsy.—Dr. L. Frigerio reports (*Archiv. Ital. delle Mal. Nervosi*) seventeen cases of epilepsy in which he found hypodermic injections of potassium bromide very efficacious, either in preventing the convulsive attacks or rendering them much less frequent. The following conclusions are based on these cases:

1. The hypodermic method deserves preference in the administration of potassium bromide, because it is free from gastro-enteric disturbances; because the remedy is more readily absorbed, and the expense is less.
2. The hypodermic injection prevents the accesses more promptly.
3. The action of the potassium bromide is more manifest, even when the disease has long existed.
4. In epilepsies of recent development the virtue of the remedy proves highly efficacious.
5. The subcutaneous injection of potassium bromide is not to be feared on account of local accidents, which are not frequent and are relatively slight.
6. The advantages are, in proportion to the dangers, so far superior that one may conscientiously trust to the method recommended in the treatment of epilepsy.—*Lo Sperimentale*, October, 1876. G. R. C.

Hot Water in Croup.—Dr. Dawasky, sanitary commissioner in Celle, refers to a remedy which has long proved extremely efficacious in croup, but which seems of late to have fallen into unmerited oblivion. He has used the remedy since 1835, with the best results. The procedure consists in allowing the hands and arms of the child to hang as deep as possible in a vessel of hot water. Hot water should be added frequently, and the application continued till the skin is swollen and reddened. After uncovering the arms and neck of the child as far as the breast, it is to be placed in the nurse's lap, in such a way that the arms hang deep into the hot water. A cloth is then placed over the child's head and the hot-water vessel so that it can inspire the warm vapor. When the arms have become intensely reddened and swollen the child breathes more freely and becomes sleepy. It is then dried carefully and put to bed. Profuse perspiration and disappearance of the unpleasant symptoms promptly follow if the remedy has been applied at an early stage of the disease. It is no longer of use when the membranous formations have occurred.—*Memorabilien*, November 8, 1876. G. R. C.

Neuralgia of the Pneumogastric and Phrenic Nerves.—Dr. Peter demonstrated on several patients the painful points characteristic of neuralgia of the pneumogastric and phrenic nerves. Neuralgia of the pneumogastrics is quite frequent in phthisis, as may be proved by making pressure over the nerve in front of the scaleni; the patient at once experiences an acute pain at that point. According to Dr. Peter, there is a close relation between this neuralgia and the palpitations, vomiting, and other gastric disorders of tuberculosis. The point of origin is the diseased lung; it is, therefore, a neuralgia by propagation. A fine example of neuralgia of the phrenic nerve, unconnected with any organic disease, a neuralgia which is still ignored by many physicians, is presented by a little girl in St. Adelaide Hospital. Unfortunately, in this hysterical patient, several painful points have manifested themselves over the spine and the intercostal spaces, and extend from the top to the bottom of the chest, thus throwing a little obscurity over the case. Since Dr. Peter has shown the existence of this variety of neuralgia, Dr. Révillant has also met with it in a number of patients.—*Gaz. des Hôpitaux*, No. 88, 1876. G. R. C.

Cold Baths in Infantile Diarrhœa.—Dr. Wocke contributes an article to the *Medizinskoie obosrenie*, in which he refers to the terrible epidemics of diarrhœa which prevail in summer, and which attack with especial severity those infants which are artifically nourished. The epidemic is due in part to the deleterious influence of the elevated temperature on the infantile organism, and in part to the injurious effect which the heat exerts on the aliment, the milk, and the air inspired. To eliminate the first cause, the author recommends cold bathing, from theoretical considerations. The result has been very happy. The wasting children, reduced by vomiting and diarrhœa to a deplorable condition, were as if regenerated by the second day after the baths were commenced. The immovable look and the restlessness disappeared; sleep was restored, the appetite increased, and the diarrhœa diminished. The cold bath acts on the child as a tonic, and enables it to resist the noxious influences, and internal remedies then exert a better influence. Dr. Wocke commences his treatment with cold douches to the head and stomach, then passes to baths, commencing at a temperature of 26° C. and reducing them to 22°. A lower temperature might prove injurious. Three baths a day are sufficient. The author has cured about one hundred cases by this method.—*Lo Sperimentale*, No. 10, 1876.
G. R. C.

DISEASES OF WOMEN.

Injections of Hot Water in Uterine Hæmorrhages.—After an experience of two years with this treatment in the most different and the severest cases of uterine hæmorrhage, Dr. Windelband states his conviction that hot injections are invaluable and certain in their effect. They are preferable, when help is urgent, to cold and astringents of all kinds. In the numerous cases of uterine hæmorrhage which have come under his notice during the above period, the tampon was employed only once, and then only because, from the urgency of the case at night, no syringe or apparatus could be procured. In regard to the application of the method to pathological processes without hæmorrhage, single observations induce him to hope for good results, especially in dilatation of the organ, in displacements and relaxation of the attachments, etc. While making the injections the patient always lies on her back, and a simple irrigator, which gives a continuous and energetic current, is employed. The temperature of the water at first is about 90° Fahr., and is raised, according to the urgency of the case, to 105° Fahr.; this can be done without fear, as the sensitiveness of the genital organs to the heat soon diminishes. One of the advantages of the method, besides its precise and prompt action, is, that the hot-njections do not by any means cause unpleasant sensations and after effects, as is always the case when cold is employed. Hot injections never leave any unpleasant or dangerous reaction; indeed, they are very pleasant and agreeable to patients suffering from pain.—(*D. Med. Wchschft. Suppl. Med.-Chir. Wchschrft.* E. F.

Hæmorrhage from Laceration of one Root of the Clitoris during Confinement, by Laroyenn (*Journal de Bruxelles*, October, 1875).—Various lesions may be caused by the passage of the child's head through the vulva; perhaps among the rarest of these is rupture of one root of the clitoris, an accident to which Joulin first drew attention. Scanzoni mentions the occurrence of hæmorrhages of the vulva, which, by preference, originate from its upper portion, and obstinately resist the strongest hæmostatics, but he does not seem to have known the cause. On the other hand, Schröder, Klaproth, Winckel, Poppel, and others, have observed lacerations of the cavernous tissue of the clitoris, followed by almost fatal anæmia. In six cases the author has observed such lacerations, always in primipara and always on one side; three cases were forceps deliveries, in one the cephalotribe was used, and two were normal; the hæmorrhage was always abundant, and showed no tendency to cease, a peculiarity explained by the construction of the erectile tissue. Hæmorrhage from this cause is usually observed when instrumental aid is required, or in cases of slow labor calling for close attention toward the termination. The pressure of the child prevents the retrograde circulation, and the swollen cavernous bodies are pressed against the rami pubes; rupture of one of these, with the mucous membrane covering it, soon takes place more or less near the clitoris. Should the mucous membrane resist, a submucous hæmatoma, or a thrombus of the vulva, would be the result; this the author has never observed. Rupture of the erectile tissue with the mucous membrane gives rise to a sudden gush of blood; in some cases the blood is seen to come from small arteries. Well-applied compression can check the hæmorrhage, hence it is of importance to discover its source. A preventive measure may also be adopted by making two small lateral incisions, as P. Dubois originally recommended for the protection of the perineal commissure in cases of narrow vulva. As these incisions are made through but little vascular tissue, no hæmorrhage from them need be feared.—*Med.-Chir. Centralblatt.* E. F.

DISEASES OF CHILDREN.

Icterus in Infants.—Dr. Orth says (*Virchow's Arch.*, B. 63, H. 3, 4) that in such cases he has always found a deposit of biliary pigment in the blood of various organs, but more particularly of the kidneys. In them he found it in the form of rhomboidal tables, or in the form of needles of a yellowish red or chestnut color. The pigment is composed of bilirubin. Dr. Orth has never found this condition in adults, even in cases of most intense icterus.—*Lo Sperimentale,* October, 1876. G. R. C.

Miscellany.

Lister's Method in Ovariotomy.—The report of a case of ovariotomy performed under the carbolic spray, published by Dr. J. Marion Sims in the *Medical Record* of December 9, 1876, has called forth a number of claimants to the honor of having used or suggested the same method long before Dr. Sims. While the important question of priority is being discussed, it would be well to give a little attention to the method itself as applied to the operation of ovariotomy. There are certain operations in which Prof. Lister does not believe his method applicable, and, as he has not advocated it in ovariotomy, that operation is probably one of the exceptions. It may be necessary to settle the question by experience, but there are certain objections to the use of spray in ovariotomy which should not be lost sight of in considering its advantages. Its use occasions some delay in an operation in which every minute is precious; the evaporation of the spray has a decidedly cooling effect on the exposed surface of the patient, and if the peritoneal cavity be exposed it is not desirable either to cool it or cover it with carbolic acid, however weak the solution. As minor objections, it interrupts the view of the operator and diminishes his sense of touch.

It is due to Prof. Lister, however, that if his method is used at all it should be carried out thoroughly in all its details, including carbolized catgut ligatures, carbolized oil for the instruments, etc., etc. This has certainly not been done in all the operations in which the method is said to have been tried. In regard to the spray, the attempt in an operation like ovariotomy to keep the air constantly and perfectly carbolized with a single atomizer is utterly futile, as the interruption of a moment invalidates the method as surely as the loss of an hour.

Deaths from Chloroform.—The *Medical Times and Gazette*, December 16, 1876, reports a death from chloroform at the Charing-Cross Hospital, London. But a very small quantity of the anæsthetic had been given, when the patient suddenly died.

The *Lancet* of December 23, 1876, reports another case as follows: "A sad affair occurred at the South Staffordshire Hospital at Wolverhampton on Saturday last. A man named Skitt, who had one of his fingers crushed, went to the hospital to have it attended to, and it was decided to remove the first joint. The house-surgeon administered chloroform, and the assistant surgeon was about to operate, when it was discovered that breathing had ceased. Skitt was a man of more than ordinary physical strength."

Another death from the same cause occurred in the office of a dentist in Rahway, N. J., January 5th. A boy, fourteen years of age, was placed under the influence of chloroform, and a tooth was extracted, when the patient suddenly ceased to breathe. It is worthy of remark that the anæsthetic was administered with the patient sitting upright in a chair, and immediately after he had eaten a hearty meal. Fifteen minutes elapsed before any efforts were made at resuscitation.

Poisoned Arrows.—Dr. Messer, surgeon to the British ship Pearl, which was attacked by natives of the island of Santa Cruz in 1875, has in his report to the Government discussed the character of the wounds inflicted by the so-called poisoned arrows used on that occasion. Ten deaths occurred, including that of Commodore Goodenough, but Dr. Messer is of opinion that death was due to tramautic tetanus, and that there is no evidence to sustain the theory that any poison was conveyed by the arrows. The *Times and Gazette* says: "The use of poisoned arrows among various foreign tribes has been received as an article of faith from time immemorial; and that some do use powerfully poisonous substances as arrow-poisons is abundantly proved by the fact that the poison known to us nowadays as 'curare' was first imported on the points of arrows. But that the greater number of so-called poisoned arrows are tolerably innocuous seems fairly clear."

Appointments, Honors, etc.—Mr. Francis Mason, F. R. C. S., has been elected full surgeon to St. Thomas's Hospital, in place of Mr. John Simon, retired. Thomas Darby, F. R. C. S. I., has been elected President of the Obstetrical Society of Dublin. Thomas Hayden has been elected President of the Pathological Society of Dublin. Dr. Tiegel, of Strasburg, has accepted the professorship of Physiology in the Medical

School in Japan. Among the numerous distinguished men who have just been raised to the Upper Chamber of Italy is Prof. Moleschott, of the University of Turin.

Dr. Robert Watts has been appointed consulting physician to Charity Hospital.

Translation of Kassowitz on Syphilis.—Attention is directed to the translation, by Dr. M. A. Wilson, of the able and comprehensive work of Kassowitz on syphilis, of which the first part appears in the present issue. It will be continued in succeeding numbers until complete. Kassowitz is one of the recognized authorities on syphilis, for the observation of which disease he has had extraordinary opportunities. The results of his large experience and enthusiastic study, as we present them, cannot but prove interesting and valuable to our readers.

The Quarterly Journal of Inebriety.—We have received the first number of this journal, which appeared in December, 1876. It is published in Hartford, Conn., under the auspices of the American Association for the Cure of Inebriates, and edited by Dr. T. D. Crothers, secretary of the Association, of Binghamton, New York, to whom communications for the *Journal* are to be addressed. The present issue is chiefly occupied with the address of the President, Dr. T. L. Mason, and a paper by Dr. G. M. Beard on the causes of inebriety.

The Toledo Medical and Surgical Journal.—No. 1, vol. i., of this journal presents its readers with an interesting paper by Dr. Waddel, on the "Cause and Prevention of Abortion," some reports of cases, and the proceedings of societies of Michigan, Ohio, and Indiana. There seems abundant material for such a journal as this, if sufficient attention is paid to the local organizations. The general appearance of the new journal s very creditable to the publishers.

Convenient Method of carrying Nitric Acid, etc.—Dr. Robert S. Peart calls attention, in the *Lancet*, to a method of carrying nitric acid, etc., in the pocket for testing urine at the bedside.

It consists simply in filling of capillary glass tubes, such as are used for vaccine lymph, and sealing the ends by a spirit-lamp. Though not new, this device is not so generally known as it should be.

The American Medical Bi-Weekly.—This journal, the first number of which is dated January 6, 1877, is the successor of the weekly journal that has been published by Dr. E. S. Gaillard since July, 1874. It has been much increased in size, and otherwise materially improved, and will, we hope, meet with the same favor that was bestowed upon its predecessor.

The New York Ophthalmological Society.—At the annual meeting of this Society in January, the following officers were elected for the ensuing year: Dr. R. H. Derby, President; Dr. H. C. Eno, Vice-President; Dr. G. R. Cutter, Secretary; and Drs. D. Curtis, H. Althof, and R. J. McKay, Committee on Admissions.

Officers of the New York Academy of Medicine.—At the annual election, held January 4, 1877, the following officers were elected: President, Dr. S. S. Purple; Vice-President, Dr. W. T. White; Recording Secretary, Dr. H. T. Hanks; Corresponding Secretary, Dr. J. G. Adams; Treasurer, Dr. H. P. Farnham.

Harvey demonstrating the Circulation of the Blood.—An excellent photograph of the engraving taken from this celebrated painting has been published by H. Wood, Jr., 826 Broadway. The original engraving has been out of print for some time, but the photograph is a very faithful reproduction of it.

Poisoning extraordinary.—According to the *Lancet*, a man who died recently in Dublin, from the effects of strychnine, stated that he had taken, in one dose, half an ounce of strychnine, one ounce of chloral, and two ounces of opium.

The Cincinnati Clinic.—This journal appears in a new and improved form. Dr. Roberts Bartholow has assumed the position of editor-in-chief, and Dr. James G. Hyndman that of managing editor.

The University of Pennsylvania.—The Philadelphia correspondent of the *Boston Medical and Surgical Journal* gives the following information:

"A new professorship has just been created in the University of Pennsylvania by the influence or at the request of Mr. John Welsh. This gentleman is President of the Centennial Board of Finance, and has won heart-felt admiration and respect, not only for his eminent and untiring services during the Exhibition, but more perhaps for his energy and courage five years ago, when he was almost alone in a firmly-rooted faith in the success of a Centennial International Exhibition. He is the one man to whose unflagging zeal the existence and splendid triumph of the Exhibition were due. Grateful citizens wished to offer Mr. Welsh a testimonial in token of their appreciation, and he with a noble thoughtfulness begged that, while he accepted the essence of this testimony, its practical form might be tendered to the university for the foundation of a professorship, to which he would be glad to give his own name. It is called the 'John Welsh Professorship,' and the endowment for its establishment was $50,000.

"Since 1868 the university has been wonderfully favored by gifts of this nature, namely, the residue of the estate of John Henry Towne, $500,000; the professorship of Dynamic Engineering, founded by Asa Whitney, $50,000; gift of land by J. V. Williamson, $75,000; gift of Reese W. Flower for the astronomical department, $200,000; contributions to the general endowment, $177,000; John Welsh Professorship, $50,000; and the library has received from four sources $40,000. The hospital has received from the city of Philadelphia six acres of land, $50,000; from the State, $200,000; from J. V. Williamson, land, $75,000, and numerous private gifts amounting to $204,000, a total of $529,000; and for the unisity at large a grand total of $1,621,000. What makes these figures more impressive is the fact that this enormous amount has been donated within the past eight years. During the eighty years prior to 1868 not a dollar had been given to the university."

The Late Dr. Thebaud.—At a stated meeting of the New York Academy of Medicine, held on Thursday evening, December 21, 1876, a committee, consisting of Drs. J. B. Reynolds and T. C. Finnell, presented the following preamble and resolutions, which were unanimously adopted:

Whereas, It has pleased an All-wise Providence to remove from his sphere of usefulness, and in the prime of his manhood, our late associate member, Dr. Julius S. Thebaud :

Resolved, That the members of the New York Academy of Medicine deeply mourn his premature and very sad death.

Resolved, That the Academy deplore the loss of a highly-esteemed member, a distinguished surgeon, and a man whose generous qualities endeared him not only to his professional brethren, but especially to his patients and friends.

Resolved, That we tender our deepest sympathies to his bereaved family in their great affliction.

Resolved, That these resolutions be published in the medical journals of this city, and that a copy of them be transmitted to the family of the deceased.

S. S. Purple, M. D., *President.*
W. T. White, M. D., *Secretary.*

At a meeting of the Medical Society of the County of New York, held November 27, 1876, the following resolutions were unanimously adopted :

Whereas, The Almighty in his wisdom has suddenly recalled the life of our beloved friend and associate, Dr. Julius S. Thebaud :

Resolved, That in his death the medical profession has lost a most gifted and experienced member, one possessing unusual skill as a surgeon, and who was also signally successful as a physician.

Resolved, That the numerous and important charities to which he had for years given his services must long cherish the memory of his great skill, his gentle manner, and his conscientious devotion to his duty. Brave and generous, genial and courteous, he possessed in an eminent degree qualities which won the confidence and affection of a large circle of friends in his professional and social life.

Resolved, That, while mourning our own great loss, we tender to his family our sincerest sympathy.

Resolved, That these resolutions be published in the medical journals of this city, and that a copy be transmitted to the family of the deceased.

Daniel M. Stimson, M. D.,
F. N. Otis, M. D.,
J. B. Reynolds, M. D. } *Committee.*

Dr. James O. Pond; Complimentary Resolutions.—At a stated meeting of the New York Academy of Medicine, held January 4, 1877, a committee, consisting of Drs. William Detmold and G. M. Smith, presented the following preamble and resolutions, which were unanimously adopted:

Whereas, Dr. James O. Pond, having attained the age of eighty-six years, and having concluded a service of twenty-nine consecutive years as Treasurer of the New York Academy of Medicine, has declined to be a candidate for reëlection: therefore—

Resolved, That the Academy desires to place on permanent record its warm appreciation of his long and faithful interest in the Association.

Resolved, That as one of the founders of the Academy in 1847, as one of the incorporators in 1851, as Treasurer since 1848, he has from the inception of the association to the present moment manifested a zeal in the welfare of the Society which has contributed largely to its success.

Resolved, That in the onerous duties of the treasurership he has always held the unbounded confidence of the Academy, and his example for courtesy, efficiency, and integrity will ever remain as a model for future incumbents of the office.

Resolved, That the Academy wish him length of years, with health to enjoy the close of a long and honorable career.

Resolved, That a copy of this preamble and of these resolutions be entered in full on the minutes of the Academy, be published in the medical journals of this city, and that a suitably engrossed and authenticated copy be presented to Dr. Pond.

S. S. Purple, M. D., *President.*
W. T. White, M. D., *Secretary.*

The Late Dr. George Wilkes.—At a stated meeting of the New York Academy of Medicine, held on Thursday morning, December 21, 1876, a committee, consisting of Drs. Austin Flint, C. R. Bogert, and F. A. Burrall, presented the following resolutions, which were unanimously adopted:

Resolved, That the departure from this life of the late George Wilkes, M. D., is a loss to the Academy, of a valued Fellow; to the medical profession, of a member distinguished for his attainments, his urbanity, and strict sense of honor in all his professional relations; to his patients, of an able, faithful, and sympathizing physician; and to society, of one who exemplified the characteristics of the true gentleman.

Resolved, That the Secretary of the Academy be instructed to convey to the family of the deceased an expression of profound sympathy for the great calamity which they have sustained in the loss of an honored and devoted father and brother.

S. S. Purple, M. D., *President.*
W. T. White, M. D., *Secretary.*

The Late Dr. Anton Gescheidt.—At a meeting of the Medical Society of the County of New York, held December 11, 1876, the following resolutions were unanimously adopted:

The death of Dr. Anton Gescheidt has deprived this Society of one of its oldest members. Although he left the active ranks of the profession years ago, his name and memory are cherished by very many of the public at large; those who intrusted their lives to his care, those who admired his power of conviction and force of character, and those who were so fortunate as to be more closely connected with him, will always remember him.

The Medical Society of the County of New York is anxious to communicate to his family this expression both of the esteem in which the departed was held, and its sympathy with their bereavement.

William Detmold, M. D., } *Committee.*
Abraham Jacobi, M. D., }

The Late Dr. Hunt.—At a meeting of the Medical Society of the County of New York, held November 27, 1876, the following resolutions were unanimously adopted:

Whereas, Dr. David Brainerd Hunt, a young and valued member of this Society, has recently been taken from us:

Resolved, That in his death we deeply regret the loss of one fitted both by Nature and education to adorn the medical profession.

Resolved, That in his devotion to study, high aims, unusual attainments, and spotless character, we recognize an example worthy of imitation.

Resolved, That the sympathy of this Society be tendered to the family of our late associate.

George Henry Fox, }
Jerome C. Smith, } *Committee.*
Paul F. Mundé, }

Test for Bile.—Dr. James Sawyer says, in a note to the *Lancet* on the use of iodine as a test for bile in urine: "I have used this test for nearly ten years, my first knowledge of it having been gained from Flint's 'Practice of Medicine.' I have found it best to place two or three drops of iodine-liniment in a test-tube, and then to add about two drachms of the suspected urine. If the coloring-matter of bile be present the mixture will assume on agitation a brilliant sea-green color. This is a ready and reliable test, and one which I have long preferred to all others with which I am acquainted."

Eye-Infirmary in Japan.—On the 20th of November the Tokio Eye-Infirmary was opened by Dr. D. B. Simmons. It is a two-storied brick building, and contains a dispensary and consulting-room, besides permanent accommodations for twelve patients. This is the first and only institution of the kind in Japan. In the evening a dinner was given in honor of the occasion. About forty persons were present at the dedication, and addresses were made by Dr. Simmons and Mr. Kuki, Vice-Minister of Education.—*Medical Record.*

Army Intelligence.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 14, 1876, *to January* 13, 1877.

Cooper, George E., Major and Surgeon.—Appointed Assistant Medical Purveyor, with the rank of lieutenant-colonel, to date from December 2, 1876, *vice* Laub, deceased.

Brown, J. R., Surgeon.—To report in person to the commanding general, Military Division of the Atlantic, for temporary duty in the Medical Director's office of that Division. S. O. 266, A. G. O., December 28, 1876.

Bill, J. H., Surgeon.—To report in person to the commanding officer, Department of the South, for assignment to duty. S. O., C. S., A. G. O., 1876.

Fryer, B. E., Surgeon.—To report in person to the commanding general, Department of the Missouri, for assignment to duty. S. O. 266, A. G. O., 1876.

Forwood, W. H., Surgeon.—Assigned to duty at Raleigh, N. C. S. O. 182, Department of the South, December 16, 1876.

Tilton, H. R., Surgeon.—To take post at cantonment, at the mouth of Tongue River, M. T., S. F. O. 46, headquarters Department of Dakota (in the field), September 11, 1876.

Billings, J. S. Assistant Surgeon.—Promoted Surgeon, with the rank of major, to date December 2, 1876, *vice* Cooper, appointed Assistant Medical Purveyor.

Brown, H. E., Assistant Surgeon.—Assigned to duty at Fort Wadsworth, N. Y. H., as Post-Surgeon. S. O. 5, Military Division of the Atlantic, January 6, 1877.

Bentley, E., Assistant Surgeon.—Leave of absence extended one month. S. O. 1, A. G. O., January 3, 1877.

Adair, G. W., Assistant Surgeon.—Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 225, Department of Texas, December 13, 1876.

Crampton, L. W., Assistant Surgeon.—Assigned to duty with Second Battalion Thirteenth Infantry, New Orleans, La. S. O. 258, Department of the Gulf, December 30, 1876.

Spencer, W. G., Assistant Surgeon.—Assigned to duty at Fort Barrancas, Fla. S. O. 182, C. S., Department of the South.

Buell, J. W., Assistant Surgeon.—Assigned to duty at Columbia, S. C. S. O. 188, Department of the South, December 27, 1876.

Wright, J. J. B., Colonel and Surgeon.—Retired from active service, to date December 31, 1876, by direction of the President, in conformity with Sec. 1244, Revised Statutes. S. O. 2, A. G. O., January 5, 1877, and S. O. 6, A. G. O., January 10, 1877.

Miller, George McC., Assistant Surgeon.—His resignation accepted by the President, to take effect January 1, 1877. S. O. 266, A. G. O., 1876.

By direction of the Secretary of War, the Army Medical Board, convened in New York City, by S. O. 149, A. G. O., July 10, 1874, is dissolved. S. O. 266, A. G. O., 1876.

Obituary.

Dr. Hermann Althof, of this city, died January 14th, after a very brief illness. A notice of his life will appear in our next issue.

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MAP OF CITY OF SAVANNAH AND SUBURBS.

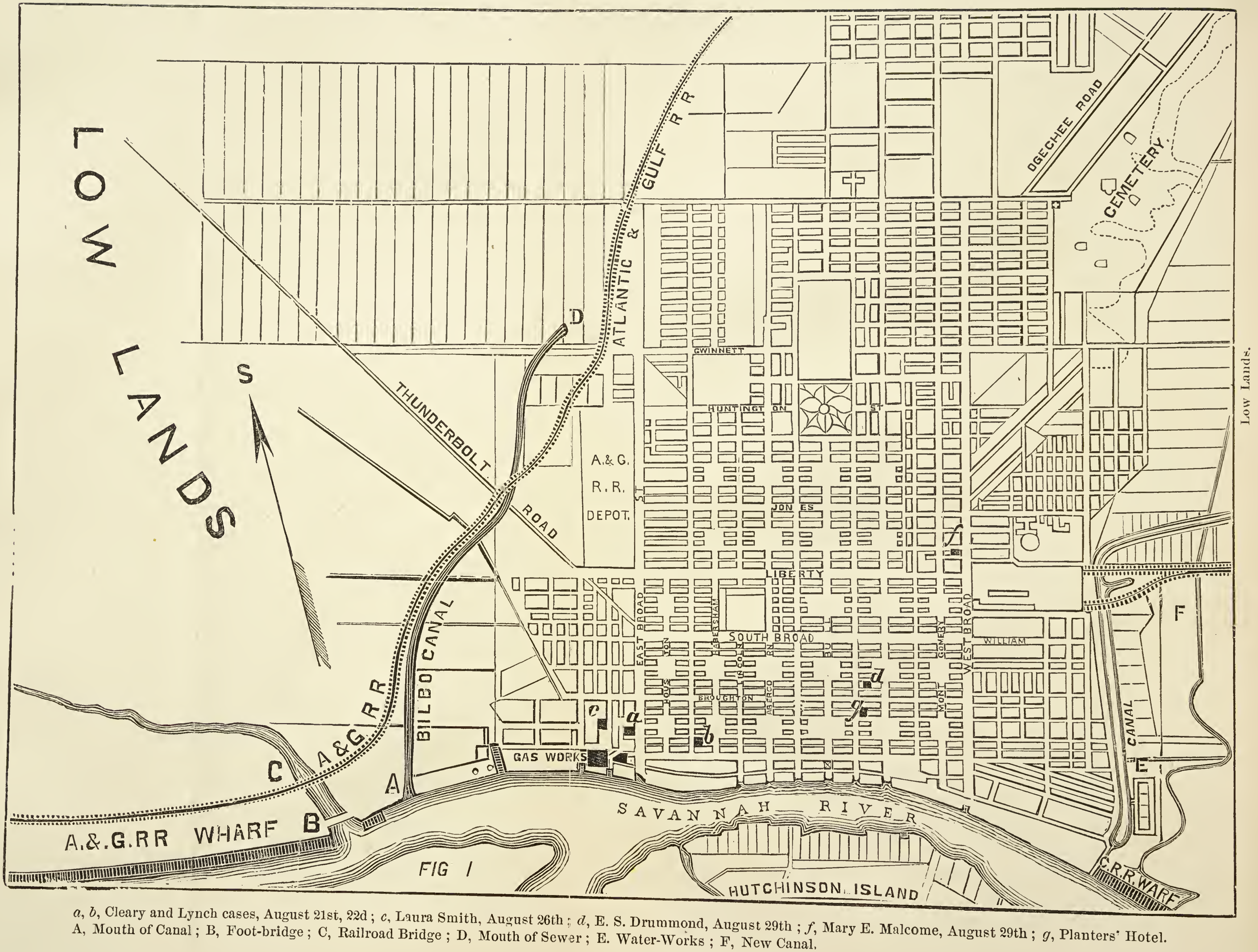
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FIG I
HUTCHINSON ISLAND
C.R.R.WARF
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Low Lands.

a, *b*, Cleary and Lynch cases, August 21st, 22d; *c*, Laura Smith, August 26th; *d*, E. S. Drummond, August 29th; *f*, Mary E. Malcome, August 29th; *g*, Planters' Hotel. A, Mouth of Canal; B, Foot-bridge; C, Railroad Bridge; D, Mouth of Sewer; E. Water-Works; F, New Canal.

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

Vol. XXV.] MARCH, 1877. [No. 3.

Original Communications.

Art. I.—*Description of a New Instrument—the Serrated Scoop—for the Detachment of Sessile Uterine Fibroids.*[1]

By T. Gaillard Thomas, M. D., New York.

I desire to bring before the Society to-night an instrument f which I have personally long felt the need, and which I ope and think will, in the future, fill a place of some impor-ance. Instead of simply giving a description of it, I shall llustrate its character and uses by the relation of a case in hich I have recently employed it, and exhibit it in connec-ion with the tumor which was removed by its assistance.

In June, 1876, I was called by Dr. John Burke, of this ity, to see with him Mrs. A., a lady forty-seven years of ge, the mother of one child, aged nineteen years, who had een for four years suffering from very profuse menorrhagia nd metrorrhagia. To such an extent had she been reduced y loss of blood that she was generally confined to her cham-er, and suffered from œdema pedum, palpitation of the heart, nd dyspnœa, upon the slightest exertion. Her appearance was hat of one suffering from an exaggerated degree of anæmia, which was rapidly growing worse from repeated and severe hæmorrhages. The liver was found to be very much enlarged as was likewise the spleen; the former, as we supposed, from fatty degeneration, and the latter from malarial poisoning.

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[1] Read before the New York Obstetrical Society, February 20, 1877

Mrs. A. had been examined repeatedly as to the uterine condition during this period, and, twelve months before I saw her, Dr. Burke had discovered the existence of a submucous uterine fibroid, supposed to be as large as the egg of a goose. At no time up to June, 1876, did he consider her in a condition fit to admit of an effort at the removal of this, but at that time he called me to decide whether it would not then be possible.

When I first saw her, I found the uterus by conjoined manipulation as large as it would be in pregnancy at the fourth month, admitting the sound to a distance of five inches, and the tip of the index-finger, when force was used, so that a hard, pyriform tumor could be touched in the uterine cavity.

The patient was so much exsanguinated, so much exhausted, and her nervous system so profoundly depressed, that I decided against operation, and she was fully sustained by diet and fresh air, in the hope that a few months would so improve her state as to render operation possible.

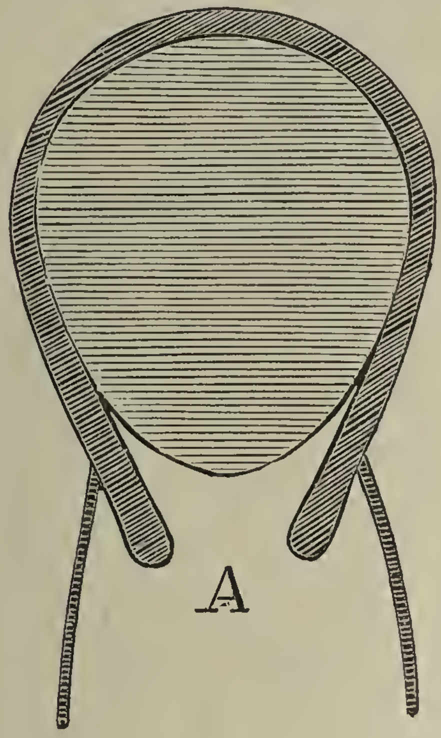
I saw her several times after this with Dr. Burke, but, instead of getting better, she steadily grew worse, and in September general dropsy set in, affecting the peritoneal cavity and the cellular tissue of the body. We now thought the case decided, and gave up all hope of removal of the uterine growth. In time, however, all the effused fluid disappeared, and, about the beginning of January, she was so far restored that the question of operation was again agitated. On the 15th interference was decided upon, and on the 28th the tumor was detached and removed.

So much has of late been said in this Society about the relative claims of different methods of removing uterine fibroids that, before going further, I will state my convictions upon the subject as clearly and succinctly as possible:

1. My impression is, that a decided and distinct line should be drawn between the treatment of uterine fibroids existing with a dilated cervical canal, and those barricaded by a con-

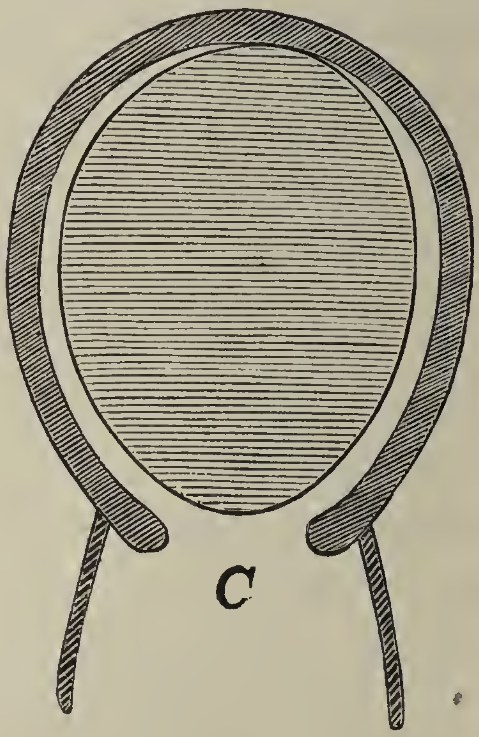
tracted orifice. Those fibroids hanging in the vagina are out of the present question entirely, for their removal is so simple that the merest tyro may deal effectually with them. I speak only of intra-uterine growths when I say that they should be divided into two classes, the line of division being the dilatation or non-dilatation of the cervical canal. In the first case, the growth can be reached and generally removed if the operator have the requisite experience, boldness, and skill. In the second, none of these qualifications can make success secure, or ward off the element of danger. I regard it as an axiom that those operators will be most successful in these cases who most uniformly secure full dilatation of the cervical canal before resorting to ablation of intra-uterine fibroid growths of large size.

2. My rule for selection of procedure has long been this: If the tumor is very extensively attached, almost down to the os internum, for example, on all sides, I cut through the capsule, and either at once enucleate the growth, or do so slowly by exciting uterine contractions by ergot, and causing the uterus to exert its power to the same end. Having made an artificial os in the capsule, I force the uterus to give birth to the tumor through it. (Fig. *A*.)



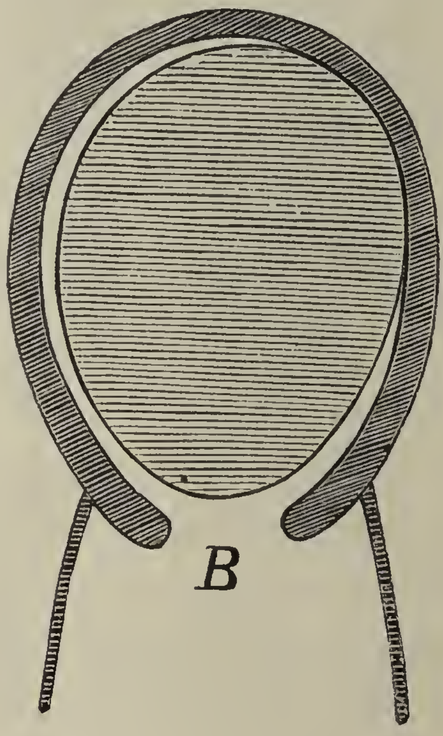
3. If the tumor be pediculated, I seize and drag it forth by strong forceps, sever the pedicle by scissors, the *écraseur*,

or the galvano-caustic wire, and see that the uterus, if partiall inverted, goes back to its place. (Fig. *C.*)



C

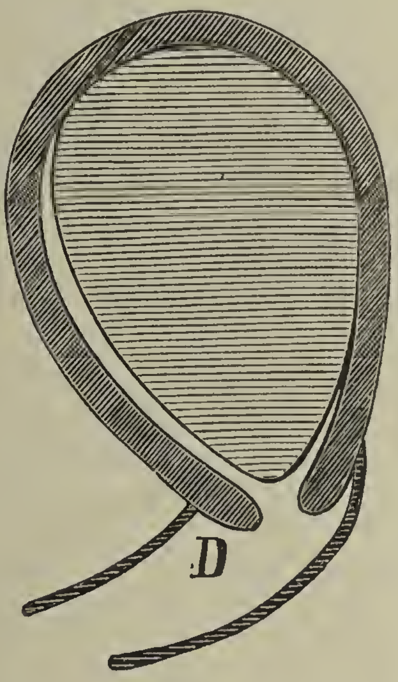
4. Should the tumor be neither so much nor so little attached, be a sessile growth, and yet not adherent to the greater part of the uterus (Fig. *B*), I resort to detachment, or, as it has been inappropriately, and, as I think, with some risk to practice, called, "avulsion." For the proper performance of this latter procedure, no appropriate instrument has yet been devised, and I venture to offer one to-night which I feel very sanguine will answer all requirements.



B

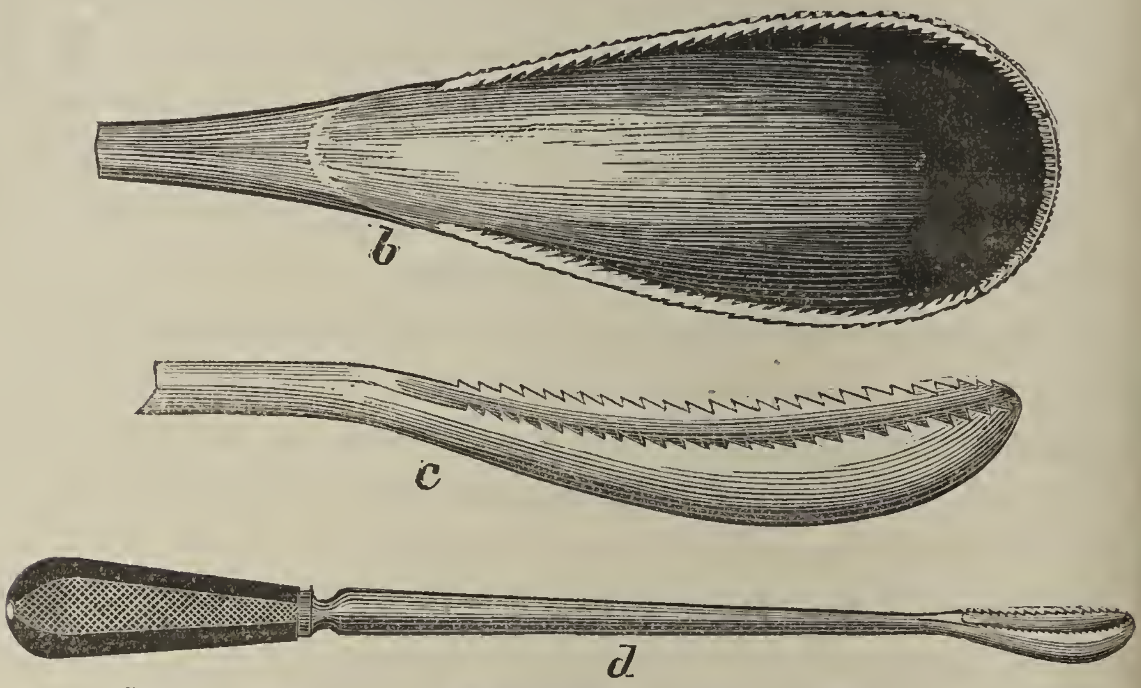
I would remark, in passing, that, when the os and cervix are sufficiently dilated to allow the passage of the finger for the guidance of a flat, elastic steel or whalebone sound with a bulbous extremity, it is usually possible to make out the exact extent and position of the attachments. In Mrs. A.'s case, I used that which I now exhibit, and by it no doubt was left as to the relations of the growth. This flat elastic strip was gently passed to the right of the tumor, the finger fixed upon it at the os externum, and a line drawn upon a sheet of paper, corresponding to it in length and curve. It was then passed on the other three sides, a similar record of it was made on the paper, and we had before us the size of the tumor and its attachments. Of course, the picture was not entirely accurate, but he who becomes an adept in this method will very soon learn to wonder at the degree of certainty to which he will attain.

By this plan the following picture was produced (Fig. *D*):



The tumor was free on the anterior wall alone; attached throughout the posterior to within one inch of the os internum.

At mid-day, on the 28th of January, detachment and extraction were practised in the presence and with the assistance of Drs. Burke, Walker, and Jones. The patient, being etherized, was placed in Sims's position, and his speculum was introduced. The cervix being then caught with a tenaculum, its lips were severed on each side, so as to open the way to the tumor, which could by the finger be felt above, before this was done, but now could be quite freely manipulated. A powerful vulsellum forceps was then firmly fixed in the growth, and securely locked. Then, with the serrated spoon or scoop, which I now show, *b*, *c*, *d*, the attachments to the uterus were rapidly severed.



SERRATED SCOOP FOR DETACHMENT OF SESSILE UTERINE FIBROIDS.

I, as were also my assistants, was equally surprised and pleased at the rapidity, ease, and certainty, with which the sawing motion given to this instrument by the right hand separated the tumor from the uterus, even at the fundus. In a very few minutes I had succeeded in detaching and delivering a tumor which, by methods which I have heretofore adopted, would have taken, I think, at least a half-hour.

It will be observed that the surface of this instrument which comes in contact with the uterine wall is so convex, so much like the back of the bowl of a spoon, that no injury can be done by it; and that the teeth of the saw upon its edge are so arranged that it would be difficult, if not impossible, to cut into the uterus by even a determined effort to do so.

I now show the hard, fibrous tumor which was removed. It weighs 7½ ounces, and measures, in its long diameter, four inches, and, in its short, three. It resembles, in shape and size, a large goose's egg, and is composed of the ordinary fibrous tissue which characterizes these myomata.

After the operation a tampon was introduced. Most of this was removed in twenty-four hours, and the remainder in forty-eight. The patient has since done perfectly well; both temperature and pulse have been very little elevated above the normal standard, and as three weeks have now elapsed, and she has for one week been sitting up and walking about her chamber, she may be regarded as out of danger.

Art. II.—*Remarks on the History and Treatment of Two Cases of Face-Presentation.* By Edward L. Partridge, M. D., New York.

In the following records of two cases of face-presentation, no points of extraordinary interest are to be found; yet, in the details of these histories, several phenomena may engage attention: and the consideration of some expedients adopted in the treatment, together with their results, may be of service as testimony in favor of a method sometimes overlooked.

Case I.—Caroline R., aged twenty-seven years, single, was admitted to the lying-in department of the New York Infant Asylum, in January, 1876. She gave a history of good health previous to and during pregnancy. This pregnancy, which was her first, dated, as she supposed, from April 20th, at which time, according to her statement, her last menstruation occurred.

Upon admission her condition was excellent, the only symptom which occasioned annoyance being very great œdema of the lower extremities. Frequent examinations of her urine failed always to show the presence of albumen.

The anasarca which, as we have said, was extreme, continued to be present until four days previous to labor, when one morning she found that *none* existed, nor did it return *at all* subsequently.

At 5 A. M., February 24th, the membranes ruptured, no pain from uterine contractions having been experienced. At noon I visited the patient, and, on vaginal examination, found an os which would not admit the finger. Through the vaginal uterine wall the cephalic extremity of the child could be distinguished. Thus far uterine contractions had been slight and infrequent. At 6 P. M., two fingers could be introduced into the os, and the presentation and position were determined to be face—the chin posterior and to the mother's right side, brow anterior and to the left.

At 8.30 P. M., Dr. Nicoll was present with me, and vaginal exploration revealed the os nearly dilated; presentation and position as before. Labor-pains were short, occurring at long intervals, and gave the patient no annoyance.

Chloroform was administered; my right hand passed into the vagina, and by conjoined manipulation the child's head was flexed on its body, and a left occipito-anterior position thereby established. The manipulation required the introduction of the fingers only into the uterus. The palms were passed over the occiput, and, by slight downward traction, the change in the presentation was easily effected. The left hand assisted in the manœuvre by external, upward pressure, lifting, to some extent, the head out of the pelvis.

During the next three hours there was no improvement in the pains, the patient obtaining considerable rest and sleep. No advance was made, the head not even engaging in the pelvic brim. During this time the presentation and position showed no disposition to alter. Between the hours of one and six, A. M., the patient was not under observation. As she could obtain rest and sleep, I had retired to bed, and, as the pains did not increase in severity, I was not summoned until the latter hour.

At this time a *face* presentation existed, with the position originally described. The uterine contractions had not improved.

At 8 A. M., Drs. Burrall and Nicoll being present, chloroform was administered, and the operation of inducing flexion of the child's head was again successfully performed. The forceps was immediately applied, and the head, in the left occipito-anterior position, brought well down in the pelvis. The instrument was then removed, and, as good uterine action occurred, the labor terminated naturally in about twenty minutes. Convalescence was normal in every respect. The child, which weighed eight pounds and a quarter, had temporary facial paralysis on one side, one blade of the forceps having made pressure in front of the ear.

Case II.—Sabrina S., aged fifteen years, single, was confined at the Infant Asylum, on September 12, 1876. The last menstruation of this patient occurred December 2d to 8th, the pregnancy being her first. During the last two months of utero-gestation she had several attacks of intermittent fever. Labor-pains commenced on the evening of September 10th, immediately after a severe chill which was followed by fever and sweating. On the 12th inst. she had another paroxysm of intermittent fever. The first stage of labor was much prolonged, without any apparent cause other than the malarial manifestations. When the os had reached the size of a quarter of a dollar, the presentation and position were found to be face, with the brow anterior and to the mother's left side, the chin being situated to the right, posteriorly.

At 5.30 p. m., of the 12th inst., in the presence of Drs. Burrall and Nicoll, the patient having been anæsthetized, I succeeded in converting, with my hand, the face-presentation into one of the first position of the vertex. The manipulation was the same as that adopted in the case just recorded. The membranes ruptured when the hand was passed into the vagina. The case was now normal with respect to the presentation and position. Excellent labor-pains followed, and the head descended to the pelvic outlet. At this time the mother was at the height of her fever, her pulse being from 130 to 140. The fœtal heart varied between 170 and 180 beats in the minute. The escape of the head from the bony pelvis was opposed by an abrupt projection forward of the coccyx at the sacro-coccygeal articulation. No progress was made for some time, during which—the patient being anæsthetized—attempts were made to overcome the deformity by the use of all the strength that could be brought to bear with the fingers. The forceps was finally applied, and three-quarters of an hour was occupied in delivery by this instrument. The child was still-born and weighed eight pounds. Examinations made immediately after labor, and again three weeks later, revealed the fact that the deformity was not relieved by the pressure of the child's head during its extraction. No history could be obtained from the patient relative to any injury sustained in that region at any time previous to, or after, the occurrence of pregnancy. The free use of bisulphate of quinine prevented any recurrence of the malarial manifestations, and puerperal convalescence did not present any but normal symptoms.

In a review of these histories, we find in the first case a few facts apparently relative to the *time* at which the presentation of the face originally occurred, and to the *factors* influencing the presentation. Four days previous to the labor of the patient first mentioned, there was complete and permanent disappearance of an œdema of the lower extremities which previously was extreme. I think that the relief of this symptom was effected at this time by a transformation of a vertex presentation into one of the face. It is probable that the irregularities of the facial contour permitted free circulation through the veins conveying blood from the lower extremities, these veins having been previously obstructed by the pressure of the firm, even, rounded surface of the cranium. Authorities generally believe that a face-presentation occurs late in pregnancy, or during the changes immediately preceding, or occurring after, the commencement of uterine contractions. Judging from the facts in this case, it would appear reasonable to suppose that the change was effected four days previous to labor.

In the history of the second case, we find nothing to indicate the *time* of the change in presentation from vertex to face.

Regarding the mechanism by which a vertex presentation is converted into one of the face, we do not find any very great disparity in the views of different authors. According to the prevailing opinion the elements which, in the majority of cases, favor extension of the head and descent of the face, are uterine obliquity, a dolicho-cephalous form of the cranium, and a hitching of the occiput upon the brim of the pelvis. In the cases under consideration, the peculiar form of the child's head was present. The occiput projected somewhat more than is usual, and consequently the posterior arm of the cranial lever was lengthened to some extent. In both cases there was slight *right* lateral obliquity. The occiputs of both children were, however, directed toward the mother's *left* side, and we must, therefore, eliminate lateral obliquity from the causes of the changes in these cases; because, in order to influence the presentation, the inclination of the uterus should have been toward the mother's *left* side. In the first case, it would appear as if the muscles governing the movements of the child's head acquired an unnatural action —during the time that the head had first been extended— which aided in the production and maintenance of the unnatural position of the child's head, because we found a reappearance of the face-presentation after it had been altered to one of the vertex. It will be observed from the history that, previous to the recurrence of the face-presentation, there had been no appreciable descent of the head, and consequently very little, if any, hitching of the occiput upon surrounding structures.

Another point illustrated in the second case was the influence of the malarial manifestations upon the duration of labor, and, more particularly, upon the length of the first stage. This influence I have observed as the only apparent cause of prolonged labors of other patients, in whom malarial poisoning existed.

3. We find, in the second case, a rapidity of the child's pulse proportionate to the frequency of that of the mother. When the mother's pulse was 140 in the minute, the fœtal heart ranged between 170 and 180. The same observation has been made in other cases in hospital and private practice.

4. We may call attention to the condition of the coccyx, present in our second patient — quite unusual when we consider her youth. No inconsiderable force was brought to bear upon the unnatural conformation without removing the deformity. From the absence of traumatism, we must infer that the condition was the result of disease—ossification at the sacro-coccygeal articulation being highly improbable at the age of fifteen years.

Finally, we come to a brief consideration of the treatment resorted to in these cases, chiefly regarding its feasibility and propriety. Judging from the success attending the adoption of the expedient on these three occasions, and reasoning *a priori*, it would appear as if no great difficulty would be encountered in efforts to induce flexion of an extended fœtal head, in many cases, where we find certain conditions favoring the procedure. The conditions of the maternal and fœtal parts *especially* favorable to the operation we would enumerate as follows: An os nearly or quite dilated; a face not engaged in, or, at least, capable of being readily lifted from, the pelvic brim; an unruptured bag of waters. In the majority of labors a stage is reached when there are present these conditions. A capacious vagina is certainly desirable, but in both of our cases we dealt with primiparæ, and, in the case in which we were successful in two attempts, there was absence of the liquor amnii. The use of chloroform for the purpose of relaxing the structures of the parturient canal, and of quieting the movements of the patient—and in order to obviate pain attending the introduction of the hand into the vagina—is of primary importance. The manipulation requires the presence of the fingers only, in the uterus, and does not involve any laceration of the cervix. If the membranes are unruptured until the hand is in the vagina, it would appear preferable then to rupture them, thus guarding against any over-distention of the uterus; and the presence of the wrist at the vaginal outlet would prevent the escape of much amniotic fluid. Passing the palms of the fingers over the occipital bone, and pressing them firmly against it, traction downward should be made. In our endeavors, not more than a few moments elapsed before we felt the head commence its flexion, and then complete flexion immediately followed. The other hand was found to be of great service, aiding by external manipulation. Having succeeded in effecting the alteration in presentation, it would be wise to watch the case closely, until the head becomes well engaged in the pelvis, in order to perceive any tendency to a return to the original presentation; and if the tendency appeared and uterine contractions were inefficient, the forceps might very properly be employed, *simply* for the purpose of engaging the head.

It would seem as if the cases we have recorded presented the usual features of face-cases. Both women were at full time, and the children of more than the average size.

The lack of success attending the operation recommended by Baudelocque, which resembles this method of treatment in some respects, has, I think, led to some indifference on the part of many authorities toward all treatment of a similar nature. Then, too, the great danger of bringing about brow-presentation, when efforts to induce flexion are made after the head has descended into the pelvis, has had its influence tending against all measures in any way like it. Baudelocque advised an attempt to alter a presentation of the face to that of the vertex as soon as two fingers could be introduced into the os. Such an attempt must be attended with great difficulty, and by much unnecessary, and perhaps dangerous, stretching and laceration of the cervix. Moreover, we would be somewhat prone to meet with a return of the face-presentation—if a change had been accomplished—because the factors originally causing the presentation of the face would still be present in full force. If flexion were secured by his operation, some time would elapse before the completion of the first stage of labor and the engagement of the head in the pelvis. During this time, if the dolicho-cephalous form of cranium existed in the child, and there was uterine obliquity, a return to the face-presentation would be quite possible.

The question which remains to be asked is, which is preferable, leaving to Nature a labor in which we have face-presentation, or employing a method of treatment such as that adopted in the cases recorded here?

Playfair expresses the views of most obstetricians regarding the prognosis in face-cases, when he says: "As regards the mother, in the great majority of cases the prognosis is favorable, although the labor is apt to be prolonged, and she is, therefore, more exposed to the risks attending tedious delivery. As regards the child, the prognosis is much more unfavorable than in vertex-presentations." Statistics, as far as they have been obtained, demonstrate that, in cases where the face descends with the chin posterior, no rotation taking place, death of an average-sized child almost invariably occurs. Fortunately, in most cases, Nature effects a rotation of the chin anteriorly; but even in this event, which is the most favorable for a face-case, we find that one out of ten children perishes.

If we are successful in that variety of treatment employed in our cases, we convert a complicated labor, attended by many dangers, into one perfectly natural with respect to the presentation. If successful, we obviate the necessity of all the tedious and uncertain endeavors recommended to assist in rotation of the chin forward; and, in all probability, we do away with the use of the forceps, with version, and perhaps with craniotomy. It must be remembered, also, that we can never predetermine whether or not a chin, which enters the pelvis posteriorly, will rotate anteriorly during descent; and, if we leave the case to Nature, and then find that no rotation takes place, we have lost the opportunity favorable to the performance of the operation to rectify the presentation. The only dangers which could fairly be attributed to the method which we advocate are those arising from the introduction of a part of the hand into the uterus, and from causing pain, and possibly some shock, to a delicate nervous system by the presence of the hand in an undilated vagina. We preclude the possibility of the second danger by the employment of an anæsthetic, while, at the present day, the first is not believed to be a serious one. In fact, the patient is exposed to but little more risk from this source, than from a thorough examination of a presenting part through a slightly-dilated os. As a possible source of danger, I do not mention the establishment of a brow-presentation, because I do not think it exists. When a head, presenting by the face, *has descended* into the pelvis, the adoption of the method advised by Clark and Hodge—i. e., upward pressure on the malar bones—certainly appears to be attended by that source of danger. Our manipulation is performed when the head is above the brim of the pelvis and freely movable. The surrounding structures, which may scarcely be in apposition with the head, offer no resistance to the movement of flexion, which, when once commenced, can hardly fail of completion.

If we should fail in our efforts, we have not further complicated our case, the face still remaining as the presenting part.

From the difficulty experienced in the delivery of the head in the second case recorded, there is but little doubt that, had the child descended with the face presenting, we should have been compelled to perform craniotomy before the completion of delivery.

Art. III.—*Contraction of Blood-Corpuscles through the Action of Cold.* By R. U. Piper, M. D., Chicago.

There is no one department of histological inquiry in which there is a wider difference of opinion than in that which relates to the structure of the blood-globules, their method of development, the normal balance of their constituent principles, and the office or offices they perform in the complex working of the animal machine. While engaged in a somewhat extended study of the blood with reference to the settlement of disputed facts in connection with some cases of legal investigation, I have met with certain changes in the forms of the blood-corpuscles of some mammals which, so far as I am aware, are entirely new to science, and if so, like all truths, they must have some value as such, while their *practical* value remains to be discovered.

In my examinations of the blood-corpuscles under the microscope, which have been made in part to ascertain whether human blood could by any means be distinguished from other mammalian blood, especially dog's blood, I have drawn and measured more than ten thousand blood-disks of men and dogs, and also some thousands from twenty other different species of animals. My method of measurement has been to place the paper on the table at exactly ten inches from the centre of the eye-piece of the microscope, while the glass slide, on which the blood-corpuscles are to be seen, is at the same distance from the central point. The object-glass used has been in all cases Hartneck's No. 9, *without* collar-adjustment, with a C. eye-piece, giving 1,275 diameters as the magnifying power. I have made tables of blood-corpuscles arranged in squares, most of the tables being made up of rows seven in number, containing seven corpuscles in each row. In some cases these tables contain from one to three hundred red-blood corpuscles. They are made to touch each other, and the rows thus formed are then measured in two directions as they are arranged. This enables me to get two measurements of every corpuscle, and thus, as I think, to settle with entire accuracy the relative size of the red-blood disks of the various animals between which this comparison has been instituted. However this may be, it is clear that, if there is any inherent error in the process, it would not in the least degree affect the relative accuracy of the result. In arranging my tables, I draw an horizontal base-line on the paper, to which is let fall a perpendicular line, forming two sides of a square. In the angle formed by the meeting of these two lines the tables are begun, and the corpuscles *piled*, so to speak, upon each other until the requisite number is drawn. I have been accustomed to make a number of these tables before measuring any one of them. In every case, when possible, they have been made up from a single field on the slide, without passing over one corpuscle, and, whenever there has seemed to be a large aggregate of large or small corpuscles in one field, several tables have been made from the same slide. I have also drawn a number of tables where the corpuscles, lying contiguous to each other in a single layer, have seemed to crowd their fellows into various odd shapes, and have found these tables to average in measurement the same as the others made from the more perfect forms found on the same slide. As the result of these various measurements of dog's blood, six thousand nine hundred and ninety-eight (6,998) in number, I find the average of a single corpuscle to be $\frac{1}{3525}$ of an inch, .007147 millimetre, Gulliver giving $\frac{1}{3542}$ of an inch, Schmidt $\frac{1}{3625}$ of an inch. From a like measurement of more than one-half the same number of human blood-corpuscles I get an average of $\frac{1}{3265}$ of an inch, .007774 millimetre, Gulliver giving $\frac{1}{3200}$ of an inch, Schmidt $\frac{1}{3267}$ of an inch. In my tables from other animals the aggregate measurements agree as nearly with the authorities as do those of man or the dog. I ought perhaps to mention, as some of my readers may not have investigated the subject, that the reason for this long course of study, and these numerous comparisons of the red-blood disks of the dog with those of man, is from the fact that the dog is the only associate with man whose blood would be liable in criminal cases to be confounded with his. It is true that the blood of the monkey, and of some few other animals, is quite near, as regards the size of the globules, to that of man, but such cases are not likely to be often called in question. My drawings from the microscope are all finished as drawn with the brush, while under the *camera-lucida*, thus assuring accuracy in size, and also of outline and texture.

Observations upon the effect of cold and heat upon the blood are as old as the time of Aristotle. Fourcroy, Gaubius, Hewson, Hey, Sir Charles Scudmore, Davy, Hunter, and many others, have made experiments as to the effects of cold upon the coagulation of blood, but not, that I am aware of, as regards the action of this agent in contracting the corpuscles.

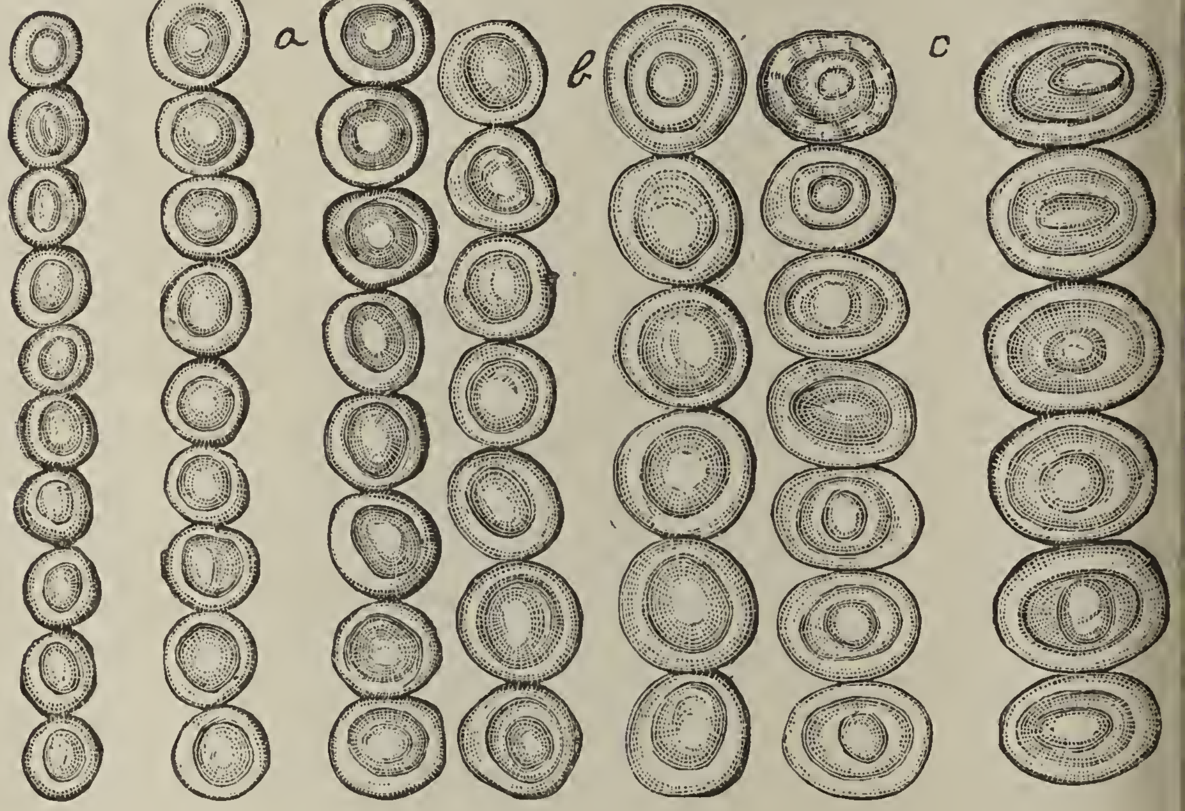
Thus much seems necessary as introductory to what appears to me, at least, a new discovery, which regards the shrinkage of the red-blood corpuscles principally, under circumstances of exposure to cold. I was led to the observation of this fact by obtaining some calf's blood from a neighboring butcher's shop; the corpuscles of which, upon measurement, I found to fall considerably short of the tables, and also of other measurements that I had myself made. Upon this I procured some ox-blood, from the same shop, which measured to a fraction the same as the calf's blood first experimented on. The flesh whence this blood was taken had been some two days in the ice-house, where it had been put while it was still warm with its animal heat. Upon noticing this fact, I obtained, at the same establishment, some blood from a freshly-killed calf. With a part of this blood I prepared several slides. Another part I left in the ice-house for an hour, and still another part I exposed in glass vials to a freezing mixture which carried the mercury to zero. Of this *cold*, and also of this *frozen* blood, I made slides, and then, after allowing both to reach 80°, the temperature of the air at the time, I made still other slides of the same blood. The average measurement, in their normal state, of one thousand and sixty-five (1,065) corpuscles of ox and calf's blood, including one hundred and nine of the calf's blood upon a portion of which the freezing experiments were afterward made, was the $\frac{1}{4312}$ of an inch, the *average*, according to Gulliver, being $\frac{1}{4267}$ of an inch.

After being exposed in the ice-house the corpuscles measured $\frac{1}{4705}$ of an inch; the same blood, carried to zero, measured $\frac{1}{5093}$ of an inch. The two other specimens, which ha been kept for some time in the ice-house, measured—the ox blood $\frac{1}{4688}$ of an inch, the calf's $\frac{1}{4728}$.

In another experiment corpuscles of ox-blood, carried t zero, measured $\frac{1}{5030}$ of an inch. The blood which had bee frozen and afterward allowed to reach 80° Fahr., before bein put upon the slide, did not show any expansion of the disks.

I give drawings of the comparative size of the ox and calf'

FIG. 1.



blood corpuscles, as seen at their normal state, and after exposure to the two successive stages of cold, from freezing t zero (Fig. 1). To this I have added drawings of the comparative size of human blood from one individual at its norma state, and also after exposure to cold as low as zero. Thes corpuscles are taken from tables containing a large numbe and cannot be far from the true measurement. The othe tables, which I have made from a number of individuals, under the same conditions as those described above, agree closely in the result as is the case with the *normal* table made from blood-disks obtained from the same individual I give also drawings of hen's blood, both in the normal stat and after exposure to the freezing mixture.

Fig. 1 *a* shows three columns of drawings of ox-blood disks—the largest is of the normal size; the next smaller shows the corpuscles as found after being taken from the ice-house; the third after exposure to the freezing mixture. The columns contain eight, nine, and ten corpuscles respectively.

Fig. 1 *b* exhibits two columns of human-blood disks, the first seven in their normal condition, the second six as seen after exposure to the freezing mixture.

Fig. 1 *c* represents two columns of hen's blood under like conditions as the preceding. It will be seen by this formula that, if one hundred corpuscles of ox-blood which have been exposed to cold be placed in a square, they will occupy the space of sixty-four normal ones, showing a loss of about a third of their superficial area. A table of forty-nine human corpuscles of blood, under like circumstances, will occupy the space of thirty-six normal ones, showing a loss of about one-fourth of their area. And the same may be said of the hen's blood. In these experiments I have drawn and placed in tables fifteen hundred corpuscles of blood from nine individuals; this, I think, may be deemed sufficient to settle the fact of shrinkage in all cases of blood-corpuscles upon exposure to cold, when separated from the living system; still, I should not consider this conclusive as to the percentage of shrinkage in every case, especially as important legal questions might be involved in the decision.

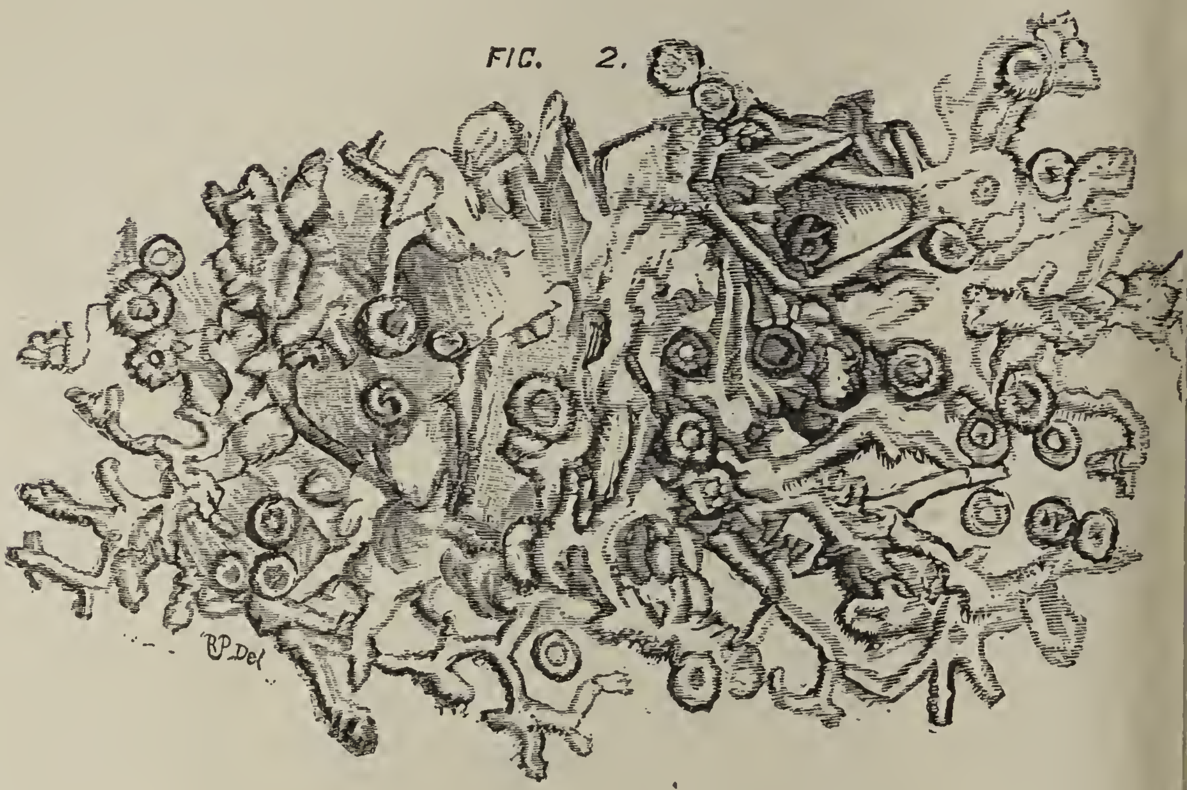
I give a drawing showing the appearance on the slides of the ox-blood which has been exposed to cold. The magnifying power in this case was eight hundred diameters.

In addition to the experiments described above, I have made six tables of forty-nine corpuscles, each from hospital patients, which sum up as follows: No. 1, normal measurement, $\frac{1}{3205}$ of an inch; after exposure to a temperature of zero of Fahr., $\frac{1}{3650}$ of an inch. No. 2, normal, $\frac{1}{3190}$ of an inch; after exposure, $\frac{1}{3772}$ of an inch. No. 3, normal, $\frac{1}{3208}$ of an inch; after exposure, $\frac{1}{3903}$ of an inch.

Upon allowing the frozen samples of blood in these cases to thaw and rise to a temperature of 80°, and then submitting the corpuscles to measurement, it was found that they had not

gained in size in the slightest degree, and this remained th
fact for twenty-four hours afterward.

FIG. 2.

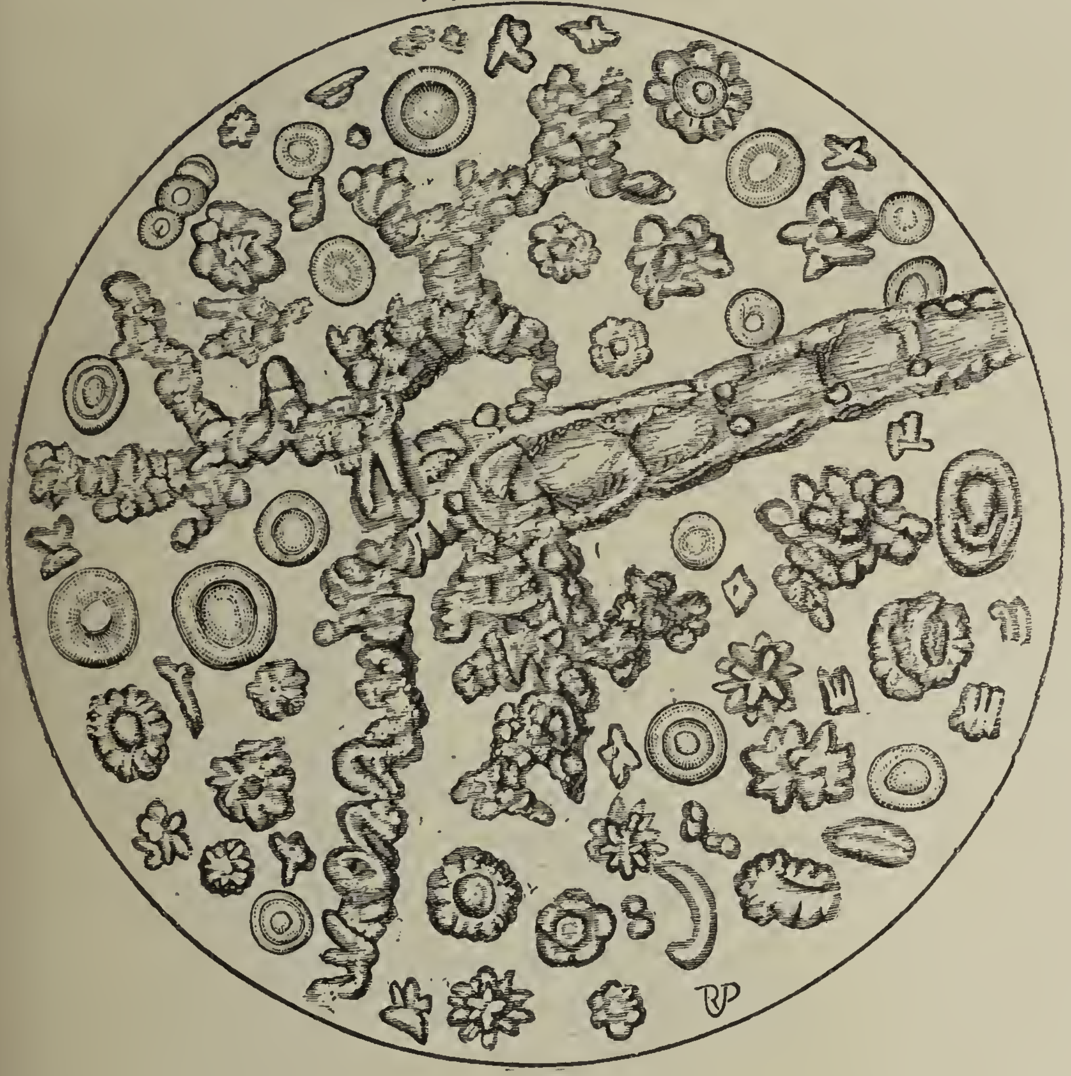


A similar appearance to that seen on the slides of ox-bloo
Fig. 2, is shown on the slides of human blood, and also t
varied forms of corpuscles seen in Fig. 3.

While in the moist state these forms could be seen movi
in every direction under the microscope, rolling over and ov
as if alive, thus giving an opportunity to notice their for
very clearly—some of them appearing, as I have endeavor
to show in the drawing, like little balls or nuclei, whence e
tended projections in every direction from the centre as is se
in some species of diatoms or echini. These projections a
pear broad at the base, tapering somewhat to their round
extremities. In many cases the blood-corpuscles seem,
contracting, to push out, from rounded centres or nuclei, p
cesses, which project beyond the surrounding substance,
if to confirm Prof. Frere's "demonstration" of blood-nuc
in contradistinction to the generally-received theories. So
corpuscles are seen with crenated edges, and also masses of b
ken corpuscles and agglomerations of fibrine, while the wh
field seems alive with moving forms as shown in the figu
The large mass, showing the radiated agglomeration of blo
globules and fibrine, appeared as if anchored to the slide, wh

the smaller forms were moving in ceaseless rounds. As the blood is allowed to settle and dry on the slide, the forms appear to become quite flat, though in some cases projections may be seen by means of oblique illumination.

Fig 3



There are a few other facts in connection with this subject of contraction of the blood-corpuscles, while in the living system even, which I wish here to put on record. The cases are so few in number that they may be wholly exceptional, or it may be, perhaps, that the subject has been but little investigated in this direction.

Through the suggestion of Prof. Frere, and the politeness of the officers of the County Hospital in this city, I have been for some time studying diseased blood, or rather blood from patients afflicted with many varieties of disease.

In one of these cases, pleurisy with effusion, I found the red-blood corpuscles to measure $\frac{1}{3868}$ of an inch. This is curiously near one of those cases, the blood of which was exposed to cold as described above, in which the disks measur $\frac{1}{3903}$ of an inch.

The other case was one of ulcerated scrotum and inflam testicle, with apparently tuberculous deposit in the gland.

On these slides, of which I have made four, may be fou continuous fields of almost perfectly-formed corpuscles, co taining thousands of specimens which measure $\frac{1}{4085}$ of inch, while, on other parts of the same slide, alike extensi fields of corpuscles, as perfect as the first, may be found, whi measure only a fraction less than the "classic" $\frac{1}{3200}$ of inch. The corpuscles on these slides present also the appea ance of concentric circles, as shown in Dr. Cutter's phot graphs.

Art. IV.—*New Apparatus for Antiseptic Surgery.*

Luis F. Sass, M. D., New York.

The antiseptic treatment in surgery promulgated by M Lister about ten years ago, has been attended by such remar able results, and has so simplified and hastened the healin process of operation-wounds, that it is now extensively adopt abroad, and begins in this country to be the object of wel merited appreciation. A great, if not the chief, element success in carrying out this principle consists in the produ tion of an antiseptic atmosphere, to envelop completely t parts operated upon, and thus destroy all organic germs floa ing in the air. To generate properly this antiseptic atmo phere, a delicate and perfect spray, which will cloud the a with a fine mist, and thrown from a suitable and safe stea apparatus, is of course absolutely essential.

The only instruments used for this purpose in the Unit States, so far as I know, have been (with one exception) repr ductions of the one employed by Mr. Lister, manufactured Europe, and imported at great expense. The exceptio alluded to was a hastily-constructed apparatus I devised the request of Prof. Stephen Smith, and which was first us on a patient operated on by him at a clinic in Bellevue Ho pital, and subsequently on two ovariotomies, one perform by Dr. J. M. Sims,[1] and the other by Prof. Thomas.

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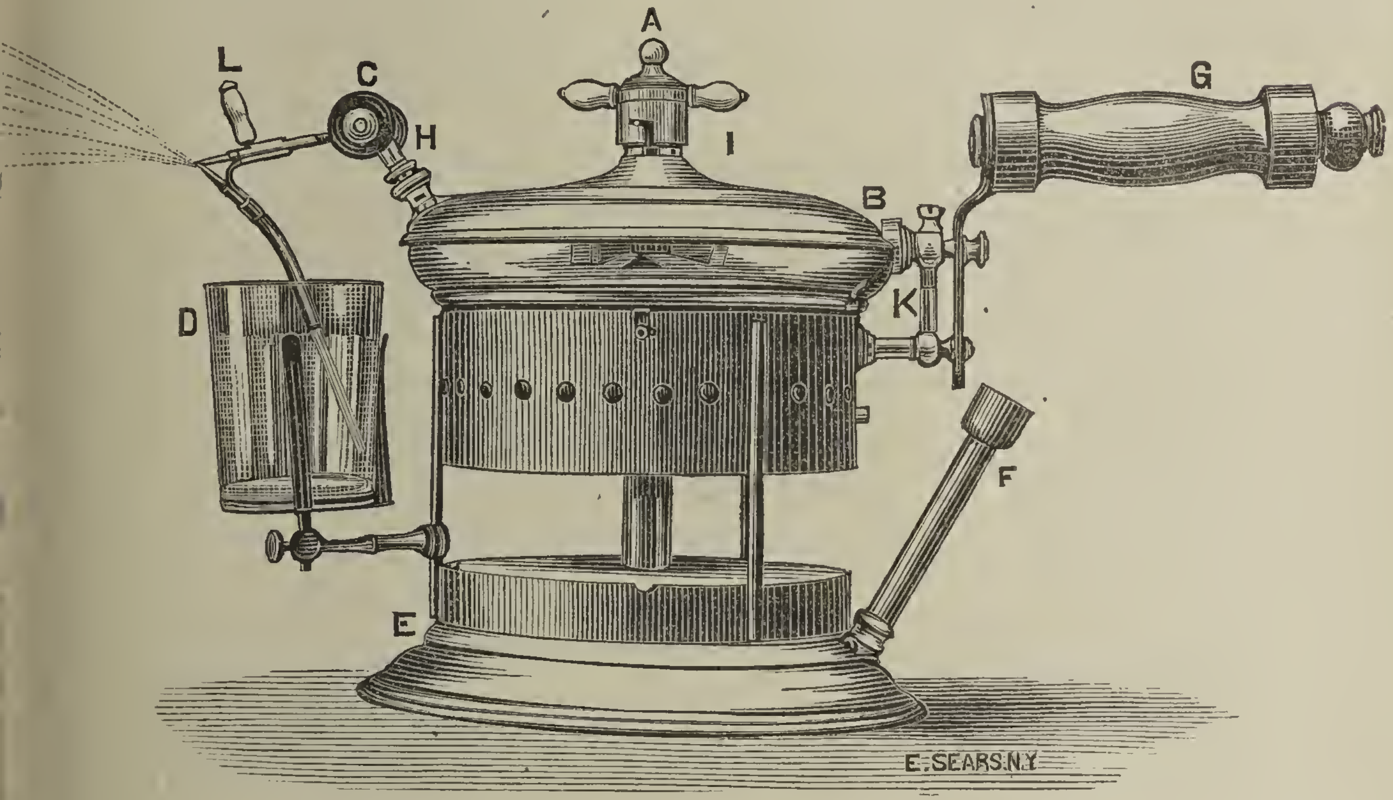
[1] *Medical Record*, December 9, 1876.

In order to meet the want, already beginning to be felt, of a self-acting, safe instrument, for the production of the antiseptic spray, one which could be readily obtained at a moderate cost, and would fulfill every requirement, I have devised the apparatus represented in the annexed woodcut, and which is being manufactured by Messrs. Ford & Co., of this city. I proceed to describe it:[1] It consists simply of a copper boiler, seven and a half inches in diameter and two and a half inches in depth, securely connected to the frame of a spirit-lamp; the former being provided with suitable tubes for the atomization, by high steam-pressure, of the antiseptic solution. The whole instrument when connected measures eight and a half inches in diameter and eight inches in height.



The letter *B* in the engraving represents the copper boiler, which is filled with water, and where the steam is generated. *A*, safety-valve for the relief of boiler. This valve works with great nicety, and renders the apparatus perfectly safe from explosion. By rotating it at *I*, it can be detached and the boiler filled. *H*, *C*, *L*, atomizing-tubes with screw-valve (*C*) for regulating the volume and force of the spray, and small handle (*L*) for rotating the tubes upward or downward as far as required. The steam-tube is made of brass; the one through which the solution raises, of silver, with a lining of platina, so that other solutions besides carbolized ones can be employed without chemical decomposition. Both tubes are adjusted so that there can be no dropping from them. *D*, glass receiver for the antiseptic or medicated solution. *E*, copper alcohol-lamp with one burner, provided with a flame-regulator. Between the boiler (*B*), and the lamp (*E*), there is a perforated metal band, which serves as a flame-protector, and securely holds the boiler, being firmly attached to the lamp by the perpendicular bars shown in the figure. The boiler, flame-protector, and lamp, are so securely connected that it would be impossible for them to become detached from one another through accident. *F*, metal funnel, by means of which the lamp can be refilled while the apparatus is working. *G*, wooden handle to hold the apparatus. *K*, glass water-gauge, to indicate the amount of water in the boiler.

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[1] Owing to an error detected too late for correction, the letters in the figure will not occur in alphabetical order in the description.

To use the apparatus the safety-valve is detached at *I*, by rotating it slightly, the boiler supplied with warm or hot water until the liquid is seen to reach the top of the glass gauge (*K*), and the lamp lighted. In a very few minutes the spray will be thrown from the atomizing-tubes, and its force and volume once regulated by the screw *C*, and its direction fixed upon the desired spot by the small handle *L*, the instrument requires no further attention. The spray can be thrown a distance of six feet, or more if desired, and will continue to be produced from two and a half to three hours without refilling the boiler; the only thing needed, even in protracted operations, being, to replenish the spirit-lamp, or the glass cup which holds the solution, as the case may be. These are both easily accomplished, and entail no interruption.

Besides the ease of manipulation, and the length of time the instrument can be operated, it is also readily adapted to all the uses sprays can be made to serve, as for inhalations in pulmonary and throat affections; spray-baths in skin-diseases; disinfection of apartments in cases of contagious diseases; production of a moist atmosphere in cases of membranous laryngitis, etc.

Finally, the component parts of the apparatus are easily separated, and the instrument can be readily packed for transportation in a box which is neither heavy nor cumbersome.

At the present time, when Lister's method of operating is attracting such universal attention, I have labored to devise an instrument for carrying out the antiseptic principle, which can be readily manufactured at a small cost, here in our own city, and which, simple in its details, and perfect in its working, will be found durable and portable, and presenting also the advantage of ready adaptability to other uses than those for which it is principally intended. If it should prove as useful and reliable an instrument as I have designed it to be, and should meet the growing needs of the surgeon in this direction, I shall feel amply rewarded for my labors toward contributing what I feel to be a necessity for properly carrying out the antiseptic principle in surgery.

ART. V.—*Report upon Yellow Fever as it appeared in Savannah, Georgia, in* 1876. By OCTAVIUS A. WHITE, A. M., M. D.[1]

EPIDEMICS are Nature's protests against the violation of her sanitary laws. Their causes may not in every instance be promptly recognized, but time and experience will surely reveal them.

The records of the past are filled with proofs of the misery entailed by neglect of quarantine and other sanitary institutions. An uncertainty as to whether many of the most formidable impressions precipitated upon mankind are of endemic or exotic origin affords commercial greed a chance too often exercised to determine the issue in its own behalf, ignoring the fact that gain in trade can never recompense for loss in population.

Studied by the light of modern sanitary science, every pestilence which has decimated humanity during the lapse of centuries has impressed its bitter and unmistakable lesson for the benefit of our own and that of generations yet to come. The institution, therefore, of public and private hygiene becomes the paramount duty of civilized man whom necessity compels to concentrate into communities.

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[1] Read at a Stated Meeting of the New York Academy of Medicine, December 21, 1876.

It is sad, indeed, to reflect that the revelations necessary for the preservation of the human race should be acquired only through suffering and sacrifice of hecatombs of victims.

The portability of yellow-fever germs or atoms has never yet been disproved, and the hope of forever shutting this pestilence out of our ports by a rigid system of quarantine is with reason entertained.

There has been a period in our medical history when yellow fever was regarded as an endemic of this continent, and its annual appearance somewhere on the coast looked for with dreaded certainty. Experience, however, has proved that those cities extremely liable to its invasion have, by a rigid enforcement of quarantine laws, enjoyed long and happy immunity.

Savannah, surrounded by local influences sufficient at any time, during summer, to hatch into activity the specific germs of yellow fever, if indigenous, has often escaped a visitation of this pestilence, while it raged with unabated fury in a near sister city.

Some medical authorities, ignoring the question of importation of this disease, have located Savannah and other cities, even northward, within a so-called *yellow-fever zone*. A critical review, however, of the health record of this city attests to the fact that no other urban locality on the broad Atlantic coast enjoys a superior reputation for general salubrity.

During an uninterrupted interval of twenty-six years, between the years 1829 and 1854, Savannah was completely exempt from visitation of yellow fever. Nor did her table of vital statistics in the mean time exhibit any remarkable increase in the rate of mortality from other causes.

Compared, therefore, with other cities on this coast, considering her commercial importance, and especially in view of her late calamity, Savannah to-day presents an insoluble puzzle to skeptics in the exotic origin of yellow fever in this country. I am willing to admit that Savannah, Charleston, and other cities upon our coast, lying within a latitude liable to high ranges of temperature during three months of the year, are within a zone favorable to the prolification and dissemination of essential epidemic germs after being transported thither; but I cannot concede, with the light of experience before me, that these cities are within the zone capable of generating independently and anew the specific poison upon which such an epidemic depends.

It seems impossible to find yellow fever disassociated from intense heat, superabundant moisture, and general filth. These are the conditions peculiarly favorable upon our coast for its reception and diffusion. The more intimately the facts become known relative to the source and spread of yellow fever in Savannah during the past season of 1876, the more firmly will the doctrine of its exotic origin become established.

An honest investigation of the rise and progress of this epidemic, so far as its specific element is concerned, will, I feel confident, superadd another to the host of proofs already offered, that yellow fever has never presented itself upon this continent without recent introduction of the germinal principle from a foreign source universally acknowledged to be its familiar habitat.

The germs of specific yellow fever I believe to be always imported. The history of no epidemic of this character seems ever complete, in this country, without the inevitable mention of a ship from an infected port.

Such astonishing statements continue to be affirmed respecting the velocity with which this disease disseminates itself, especially among shipping at anchorage, that the medical mind is yet undetermined both as to the relative speed with which the *materies morbi* can diffuse, and as to the maximum distance at which their baneful influence can be aërodynamically transmitted.

Shortly after I arrived at Savannah, I learned that, on or about the 29th day of July, a seaman named Schull had sickened on board the schooner T. H. Sever, which had been discharging a cargo of ice recently arrived from New York, and was taken to the Marine Hospital in Savannah, where he died after presenting *peculiar symptoms.* This schooner I was assured had laid at the identical wharf, about four hundred and fifty feet apart from two West-Indiamen, the bark Nueva

Ygnacia and the brig Ynez—one twelve days from Matanzas, the other thirteen days from Havana.

Dr. George H. Stone, assistant surgeon in the Marine Hospital service, under whose care this man fell late in his attack, has stated that Schull died on the 30th day of July, with a sudden and overwhelming gush of hæmorrhage from the mouth while sitting up calmly and cheerfully in bed. No particular alarm seemed to have been excited by this case, nor did announcements of subsequent suspicious deaths which took place after this date, up to the 21st day of August, occasion any special uneasiness.

The death-list, carefully compiled and published in the *Savannah Morning News* of November 28th, specifies two deaths as having occurred on the 6th day of August, one of *chronic enteritis*, the other of *congestive fever*. A girl died of *malarial fever* on the 14th day of August. A boy succumbed with *pernicious fever* on the 16th of the same month, and on the same day a woman died of *remittent fever*.

The two Spanish ships above named discharged their cargoes at the Atlantic & Gulf Railroad Wharf, consisting of about one hundred and fifty tons of ballast, between the 14th and 17th days of July, the seamen being permitted to take their several mattresses and blankets to a lodging-house within the city.

On the 17th day of July the Spanish bark Maria, twenty-three days from Havana, arrived at this wharf, and discharged her cargo of one hundred and forty tons of ballast, and departed.

On the 2d day of August the Spanish brig Pepe, seventeen days from Havana, arrived at the same wharf and discharged a similar cargo.

On the 17th day of August the Spanish bark Maria Carlina arrived at the same wharf, twenty-three days from Havana, and relieved herself of two hundred tons of ballast, which was duly deposited upon this identical wharf.

The first recognized and publicly admitted case of yellow fever originated precisely where we would expect to find it, viz., among that class whose habits and rank in life render them peculiarly liable to pestilential agents. This happened in the person of a boy by the name of Cleary, who died at his humble dwelling in the extreme northeastern section of the city, the nearest inhabited point in a direct line from the Atlantic & Gulf Railroad Wharf, in the immediate vicinity of the Gas-Works, within a stone's-throw of the river-bank, about eight hundred and fifty feet from the habitual haunt of *all* the Spanish seamen who frequent the port, and even within the identical street, about two blocks distant.

The Cleary boys and the children of the mistress of this lodging-house were constant companions, and were often seen playing together about the wharf so memorable in this history.

The day after the death of the Cleary boy, a child named Lynch, living a few doors off, and within the same block, died also of admitted yellow fever.

The next victim in order was Laura Smith, who occupied a house just back of the Clearys', and who died August 26th. Drummond's death and that of Mary Malcome succeeded on the 29th day of August. The latter of these two cases, it is true, occurred far over in the western part of the city, but direct transportation thither can be clearly traced, besides which the occurrence of cases at such wide distances apart after introduction into a city of yellow-fever poison may readily be accounted for by the unrestricted perambulation of straggling crews, or by diffusion of fomites through infected clothing and bedding.

It is wholly unnecessary to pursue this connected recital of cases any further, since the disease became soon so general that Dr. Duncan, of Savannah, informed me he had computed forty-six deaths from yellow fever alone from August 21st, the the date of Cleary's case, to September 1st.

Savannah is situated upon a sandy plateau, on the southern bank of the river of the same name. The site of the city is eighteen miles from the mouth of this turbid river, in latitude 32° 5′ north, is surrounded on every side by vast lowlands which require unremitting attention to prevent them from lapsing into septic sources of miasmatic emanations.

The city faces north and toward the river. The ground upon which it is built is so nearly a level plain that the drainage of much of the city is necessarily defective, and a great deal of rain is compelled to pass off by evaporation and absorption.

Surfaces that are prompt to imbibe moisture, in such latitudes, cannot fail to be also exceedingly ready, under the influence of torrid suns, to exhale insalubrious vapors. The original investigations of Dr. Fergusson, so lucidly detailed in the ninth volume of the Edinburgh "Transactions," respecting the febriferous activity of porous soils under solar desiccation, has placed this once doubtful question quite beyond the reach of cavil, and in consequence far less confidence than formerly is reposed in the health of such geological formations.

Even with the pelagic record, therefore, of this epidemic so clearly defined, the terrene history, however briefly and partially it may be told, must prove vastly suggestive to those interested in problems of public hygene.

During the early spring and part of the summer of 1876 all the aërial, terrestrial, and meteorological conditions known to be favorable to the development of miasmatic diseases, were active in and about the suburbs of Savannah to an extraordinary degree.

According to the statement of the Signal-Office Bureau, the monthly mean of the thermometer for June was 80.56°. The rainfall was 18.80, and the total number of clear days was but fourteen.

The monthly mean of the thermometer for July was 84.5°, and the rainfall was 6.11.

The direction of the prevailing winds for both of these months was southwest.

There was no abatement of heat during the month of August, the monthly mean of the thermometer being 84.1°, and the rainfall 6.88.

In compliance with my request, Mr. Sinnott, the acting observing officer, *vice* Mr. Garrard, of the United States Signal Service, deceased, computed the number of calms during the month of August, estimating all observations under four miles per hour. The result was found to be—morning, 23; midnight, 26.

The wind prevailed chiefly from the south during this month, and during the two previous months from the southwest, over an undoubtedly miasmatic region.

The past summer was remarkable for extraordinary ranges of temperature all over the United States. Physical peculiarities and season, therefore, singularly favored the prolification and diffusion of miasmatic germs, and the continued calms by night and day promoted their accumulation and concentration.

It is generally conceded that the form of a yellow-fever epidemic is determined by constitution of the atmosphere, by electricity, heat, humidity, and by prevailing winds, and its character intensified by pernicious gases which exhale from paludal sources, unsanitary sewers, privy-vaults, stables, vacheries, and middens.

In order, therefore, fully to appreciate the character of this disease which so speedily became *pandemic* in its far and wide-spread comprehension, it is proper to take a rapid survey of the immediate surroundings of Savannah, and particularly of the intramural condition during the past season.

Driving through the streets of this charming "Forest City," nothing inimical to health presented itself. Flourishing trees lined the streets on either side with grateful shade; and the umbrageous and grassy parks at nearly every alternate corner, the commodious residences placed at eligible intervals apart, with here and there tasteful private gardens, exuberant in foliage and resplendent in tropical glory, charmed the eye with views of health, comfort, and refinement. But it was manifest, upon inspection, that numerous surcharged privy-vaults throughout the city nightly exhaled noisome gases, tainting the air with toxic exhalations. Festering "dry wells," those recipients of human excreta, illimitable in septic capacity, acted like huge retorts, with beaks turned inward to habitations, belching forth, under the influence of blazing suns and pressure of rising ground-water, inexhaustible quantities of mephitic vapor.

In immediate proximity to the city limits were the dumping-grounds of the city scavengers, acknowledged cradles of pestilence, and the Bilbo Canal, with its foul and sedgy tributary ditches—all open conduits leading from city sewers—teemed alike with putrefying refuse and human ordure in their slimy and obstructed beds.

The wide-stretching *Netherlands*, so peculiar to Savannah, had been exposed, by neglect, to frequent overflows and saturation. Heavy rainfalls occurred upon these early in the season, followed by protracted and excessive heat, which started into active decomposition and extrication the dangerous hydrogen compounds, resulting from animal and vegetable decay, abounding in these localities.

About three-quarters of a mile distant from the eastern quarter of the city, in a direct line, lies, stretched-out, the Atlantic & Gulf Railroad Wharf, receiving from the Antilles constant relays of pernicious soil.

Three days after I reached Savannah I visited and examined this locality with Colonel Screven, and denounced the suicidal economy which dictated the construction of a wharf, in a southern climate, of contaminated material imported from the pest-bound coast of Cuba.

I have ascertained, from reliable authority, that over two thousand tons of blue clay, from the neighborhood of Havana, had been spread broadcast on this wharf from the holds of West-Indiamen during the past year, and that the only white man who handled this ballast was duly taken sick with yellow fever, but the negro laborers escaped.

Into such congenial soil and atmosphere the fatal germ of yellow fever was sown; and, alas, how melancholy a harvest was gathered! Such a combination of causes could not fail to create an epidemic, which must prove alike inimical to every class and condition of human life, the continuance of which depended only upon the fertility of the soil and other concomitant favorable circumstances.

This epidemic, therefore, it will be understood, was the combined product of three factors—ochlesis, koino-miasm, and the specific germinal principle of yellow fever. This latter component element imparted to the other active epidemic causes its peculiar and specific malignancy. Differing, therefore, in certain essential particulars from every other epidemic of yellow fever I had before witnessed, it de manded special modification in respect of treatment, which I proceeded without delay to initiate. Familiar with every phase of yellow fever, having combated it through so many seasons, I soon realized that I had enlisted against an epidemic of peculiar character. Careful examination of numerous cases in various stages, aided by the acumen and painfully-earned experience of my distinguished friend Prof. J. G. Thomas, of Savannah, enabled me thus promptly and fully to appreciate the type of the malady, and to decide upon the plan of treatment suitable to the emergency.

Surrounded by such influences, I felt thoroughly convinced that no charmed circle of acclimation could exist; that all supposed barriers were overthrown; and that all within the limit of this *pandemic* were alike exposed to dangers.

The native blacks of Savannah and Charleston, S. C., fell victims to this disease. Certain individuals, who had been ill early in the season, endured a second attack, which, in some instances, proved fatal. The very afternoon of my arrival in Savannah, I saw in consultation a patient hopelessly advanced in this disease, who, up to the moment of seizure, felt assured of immunity, having had, a few years previously, yellow fever in Havana. Such instances, however, are rare, but by no means without precedent. One of the earliest cases which occurred in Charleston, in 1858, was that of an individual who recovered from yellow fever after having had black-vomit, and hæmorrhage from the gums, in 1854. But by far the most unique case on record is that of an old lady eighty-two years of age, who had never left the city of Charleston, and died in the summer of 1854, under my care, of a genuine, well-marked attack of yellow fever, with black-vomit and orange-hued skin.

The *pandemic* was at its height when I arrived in Savannah. Two hundred and six deaths had just occurred in the city from all causes within a period of six days, and forty more were reported to have died on the same day. I found the weather excessively dry, sultry, and non-ozonic, and the mean temperature ranged over 80°.

According to the census taken by the police force near the close of the epidemic, the entire population was computed at 18,967. Of this number 11,614 were colored, and 7,353 white inhabitants. It was also estimated that about 1,000 whites were in the habit of quitting the city every night, and were not, therefore, subjected to the same amount of exposure.

Between August 1st and November 26th, 1,574 individuals died from all causes; and though in the list of deaths published in the columns of the *Savannah Morning News*, Tuesday, November 28th, other fatal causes than yellow fever are assigned in numerous instances, no competent observer can fail to detect the manifest errors committed in diagnosis and nomenclature.

When we consider that by far the largest portion of the population of Savannah who remained during the prevalence of the epidemic were colored, and who, as a class, are ordinarily exempt from danger, among whom, moreover, this disease usually appears in a mild form, the percentage of deaths strikes us with profound amazement.

The general character of the epidemic reminded me so forcibly of that form of disease described by Jackson, Alison, and Moseley, and since lucidly dwelt upon by Aitken, under the title of "Malarious Yellow Fever," that I forthwith called the attention of my friend Prof. Thomas and other leading practitioners in Savannah to the close identity.

"Malarious or paludal yellow fever," remarks Aitken, "seems to prevail for the most part in towns situated on the sea or river coasts of alluvial countries, in warm climates, and that while the banks of these rivers are liable to occasional alternate periods of inundation and drying up, the fluctuations of the tides, coöperating with these, contribute powerfully, under intense solar heat and a windless atmosphere, to render the towns along the shores of such districts the seat of this disease.

"When a remittent fever, or other paludal or littoral fever, has, under certain concurrent circumstances of weather, season, and physical peculiarities, made its appearance in any locality, it necessarily attacks all those who are, by constitution, habit, and age, susceptible and predisposed, and the majority of these it destroys."

"While ague is the offspring of the marsh or its margins," writes Dr. Craigie, "and remittent is the effect of a more concentrated form of the same exhalation from some moist surface in the process of solar desiccation, the malarious form of yellow fever appears to be the product of that state of the atmosphere which takes place after long continuance of solar heat, with little or no wind, in those points chiefly where the atmosphere of the sea and that of the land are in constant communication and interchange.

"It is indeed a remarkable fact that the intense form of remittent fever, which has been distinguished as malarious yellow fever, and sometimes as bilious remittent of malignant type, is rather rare in the interior of countries, and is seldom found in towns situated on rivers higher than the influx of the tide. The fevers which appear in these situations are more of the usual remittent character, and in the interior of the American Continent there is little doubt that the lake-fever represents the malarious yellow fever of the coasts. Even in Europe, while the towns on the sea-coast and on rivers were laboring under the malarious yellow fever, the sickness in the interior approached more to that of the remittent, or remittent continuous, type."

The character of the fever which came under the critical observation of Lamprière in Jamaica, it will be remembered, was distinctly described by him as "a variety of yellow fever, grafted upon a remittent;" and though the lamented Blair, in his "Essay upon the Epidemics met with in British Guiana," contended that the disease he noticed was "specific and *sui generis*," he was forced to admit "the intermittent malarial fever is so powerful here that the yellow-fever epidemic could not supersede it," and he still further testifies that this influence "in many modified the succession of symptoms."

An epidemic of a similar nature, however, to that which prevailed last summer in Savannah, with such destructive effect, is not without precedent in this country. The posted student of the literature of this subject cannot fail to recall the detailed experience of Dr. Lewis, of Alabama, in the hybrid epidemic, which he describes as having appeared, in

1842, in Mobile. In that epidemic quite a number of cases were distinguished, marked by evident blending together of malarial with specific yellow-fever poison, as "congestive, simulating yellow fever;" and M. Thomas, in his very interesting "Traité sur la Fièvre Jaune observée à New-Orléans," also affirms he had detected "a remittent pyrexia" in several instances among the hosts of cases he so critically passed in review.

At the meeting held in the year 1873 by the American Public Health Association, a brief paper was submitted by Dr. J. T. Gilmore, of Mobile, Ala., recording a succinct "Account of the Yellow Fever as it prevailed in Mobile and Vicinity in the Summer of that Year."

Upon the 393d page of the published "Transactions" referred to can be found the following testimony of Dr. Gilmore: "In localities where malaria exists, we have malarial fevers, and, when the poison of any fever is introduced, this atmospheric condition gives it lodgment and propagation. And I believe that the fever we have seen as existing here this season, and in 1867 and 1870, was this fever, with more or less of the specific yellow-fever element incorporated with and engrafted upon it, and the presence of these two distinct forms of fever explains to my mind the oftentime-heard expression, that every epidemic of yellow fever exhibits different features from the preceding. This paludal or littoral form of fever is a disease of low mortality, and the real or specific yellow fever is a disease of almost unequaled fatality."

The development of this disease is, without doubt, dependent upon the endemic conditions peculiar to those localities lying between 42° north latitude and 10° south latitude, and is, therefore, not likely to be detected beyond this geographical belt. The resemblance between the specific yellow fever and its less malignant congener, even when unmixed, is acknowledged by all observers to be remarkably close, and diagnosis is at all times exceedingly difficult, though distinction can be invariably made out by an expert.

It is an important fact that, upon the announcement of this epidemic, quite a large number of residents rushed into the healthy sections of the adjacent country. From these safe and accessible retreats, many, throughout the season, continued to revisit the city daily, to transact business, scrupulously shunning the danger of being caught within the zymotic precincts after sundown, and, taking no other special precaution, these parties are said to have escaped the scourge.

As is invariably the case, during the prevalence of such epidemic cause, every other disease became subordinate to it, and the most trifling indisposition paid homage to the dominant presence, and wore its livery.

Radiating from palpable causes, the infectious character of this epidemic was clearly established. The specific element extended throughout the city only so rapidly as the *materies morbi* could diffuse itself, and appeared to fix with great tenacity upon certain localities in which "crowd-poison" appeared to be a supreme ingredient. An old hotel on the south side of Broughton Street continued throughout the epidemic to furnish most malignant cases.

Originating from the three causes I have specified, this disease, in its mode of invasion, very naturally, differed in certain respects from those commonly described in less mixed epidemics. The accession was rarely sudden and without premonition. Individuals were often notified of the imminence of an attack by one or more of the ordinary prodromata. Yellowness of the conjunctivæ, ocular spectra, giddiness, loss of appetite, tendency to sweat upon slight exertion, and flatulence, being the commonest premonitory signs.

Purely malarious fevers never make their invasion during the night, and I noticed in this, as in previous epidemics, that the small hours of the day and night, particularly the latter, seemed selected as the periods of onset. Patients were commonly aroused from midnight slumber to face an attack of this fever, and these cases, as a rule, presented the most threatening head-symptoms.

Every case began with a chill, more or less pronounced, some started with a decided and enduring cold fit, others with an indefinite sense of horripilation. A scorching fever immediately succeeded to these sensations, bearing no harmonious relation to the antecedent chill. All alike presented the grave and formidable initial symptoms of an open attack of yellow fever.

The stomach, generaly the first to sympathize, was thrown into distress, with nausea and sometimes vomiting. The suffering in the head, commonly limited to the brows, was often referred in the direction of the longitudinal sinus. Restlessness and insomnia were constant throughout the febrile paroxysm. Few cases presented delirium, though the countenance of each wore a puzzled or dejected aspect. The face was flushed and turgid; the eyes watery, heavy, and injected, often intolerant of light and tender to the touch; the respiration was hurried, often interrupted by sighs; epistaxis would sometimes occur, to the great temporary relief of these symptoms, but the progress of the case invariably showed that this loss of vital fluid was illy borne.

Of all the torturing symptoms the wretched patient was called upon to endure, spinal aching was the most intolerable; it was wailingly bemoaned, and caused ceaseless and incontrollable jactitations until relieved.

All the early symptoms appeared to result from a state of venous repletion. This peculiar condition set in speedily, formed a characteristic and enduring complication throughout every stage, quite up to restoration, accounted for many of the dangerous determinations which persistently threatened, retarded convalescence, and ushered in the fatal close.

The tongue during the early stage was commonly moist, pale, trembling, swollen, indented. The imminence of gastric disquietude was presaged not so often by preternatural redness about the tips or edges, with coating, as by a marked tendency to dryness, with pallor.

The efflorescence about the surface of the face, neck, and back, noted first by Hildebrand, subsequently by La Roche, by Barton, of New Orleans, and which I myself have often witnessed in other seasons, though carefully searched for, was not apparent during this epidemic.

No case during any stage of this disease, or even after death, presented the noted and characteristic deep-orange hue of the skin, as seen in some unmixed grades of this disease.

The skin, dry, harsh, and hot, appeared singularly insusceptive, and would often for a long time resist the effect of croton-oil or blisters.

When black-vomit did occur this season, it was invariably after subsidence of the fever, and during the period of calm. In most of the epidemics that I have seen, this dreaded symptom has usually manifested itself early on the decline of the first stage.

A young mulatto girl, whom I was called in to attend during the second day of her attack, and who presented an exceedingly irritable stomach, was the only case in which I witnessed the peculiar azure-colored vomit, noted so repeatedly in other epidemics. This manifestation has been plausibly explained as due to excess in the stomach of free hydrochloric acid, which has combined in certain proportions with vitiated bile and saliva.

A most remarkable symptom, and one to which attention has never before been called, presented itself during this epidemic—that of total blindness, with dilatation of the pupils. This occurred in but two notable cases, so far as I have at present learned. One of these fell under my own immediate observation, in consultation with Prof. Thomas. The patient was a young son of William Inglis, a well-known and highly-esteemed colored barber, formerly of Charleston. This boy's case came on with the usual train of symptoms, his headache confined to the frontal region, and not being particularly urgent. Everything progressed naturally until the end of the second day, when he was suddenly stricken with amaurosis, the pupils being greatly dilated. His other senses and strength appeared remarkably good, and his spirits not depressed. This condition lasted four days; at the expiration of which period he began gradually to distinguish light, and by the time he was able to sit up, about five days after, his eyesight was completely restored.

The second instance in which this extraordinary symptom appeared was in the person of the lamented Dr. Juriah Harris. This esteemed physician of Savannah fell a victim to the pestilence on the 7th day of November, having been, in like manner, struck blind, with dilated pupils, twenty-four hours before the close of his valuable career.

The pulse was rarely as frequent from the commencement of attack as the state of the respiration or temperature might warrant. Within one hour after reaction from the chill, the thermometer often registered a body heat of 102° or 104°. The thermometric examinations taken regularly at each visit yielded interesting results. To gain a speedy and accurate observation, the instrument was invariably applied under the tongue or within the rectum. The same usual want of correlation between the range of the temperature and pulse, that I had noticed in previous epidemics of yellow fever, was strikingly repeated during this season.

The pulse and the heat of the skin, as noticed by crude touch, would commonly indicate entire subsidence of the febrile paroxysm within about twenty-four or thirty-six hours, when the unerring thermometer would still continue, throughout the delusive calm, to display a cautionary signal of danger.

The pulse, surface of the skin, and other symptoms would often appear to indicate complete defervescence of fever, when the thermometer would render apparent that the fit was at its height.

In the event of any dangerous complication arising, the thermometer would rise suddenly and rapidly. In two cases which I witnessed the thermometer indicated as high as $107\frac{2}{5}°$. The pulse, meantime, in both, rated not over 100, moderately soft, and with only a nervous thrill.

The thermometer, therefore, proved, as ever, a most trustworthy and indispensable auxiliary, affording always the first intimations of approaching danger or convalescence. Indeed, the appalling horror of a "walking case," which strikes terror in the course of such epidemics, can be forever placed beyond contingency by frequent reference to the reliable revelations of this most refined and sensitive "instrument of precision."

According to the thermometer, the duration of the first or febrile stage never exceeded four days, but three days appeared the limit in by far the largest number of cases. The second stage rarely lasted over twelve hours.

Patients ordinarily glided so insensibly through the second stage into convalescence, under the masterful influence of the treatment, that it was only by aid of the thermometer that the line of demarkation could be ascertained.

The mixed character of this epidemic seemed definitely indicated by the following facts:

1. By the prompt submission of the disease to positive doses of quinine.

2. By the remarkable death-rate among the blacks.

3. By the large fatality attending cases which occurred mong supposed inured natives and other inhabitants, who, rom acquired acclimation, do ordinarily escape infection rom yellow-fever poison alone.

4. By the unusually great percentage of deaths which ocurred among children under twelve years of age.

5. By the mitigation which ensued in the pythogenetic haracter of the pestilence after occurrence of sluicing rains, which served to wash out the sewers, about the middle of October.

6. By very decided abatement in the malarial element of he epidemic succeeding the appearance of light frosts around he immediate limits of the city near the close of the season.

It is manifest, therefore, from the facts thus broadly tated, that, even had no pelagic element been introduced nto Savannah during the past season, this city could not ave escaped endemic visitation of an intense and widepread typho-malarial character.

Remedies which have been employed with signal success n the course of one season, have proved utterly valueless, ay, even hurtful in another. This well accounts for the sucess which has attended various forms of treatment, the very everse of each other in different epidemics.

No one familiar with yellow fever will ever continue to ndulge the hope that a treatment can be devised which shall n every instance prove equally efficacious. Whoever, thereore, undertakes to erect upon the experience of a single epiemic a plan of treatment for yellow fever, which he expects o bear him on to success through every other, must be preared to find his ingenious structure fail to sustain his exectations.

My first professional acquaintance with yellow fever began in Charleston, S. C., twenty-seven years ago; and while yet a tyro in practice, I learned, through successive seasons of hard-earned experience, that every particular epidemic presented a fresh problem to be evolved and successfully worked out.

During the yellow-fever visitations of 1849 and 1852, in Charleston, I was compelled to follow with content the well-beaten track of practice laid down by predecessors. Soon, however, dissatisfied with the results observed, and recognizing a difference in the type of each epidemic, I resolved, in 1854, to venture upon innovations. These eventuated so encouragingly that I was quite ready again, in the season of 1858, to boldly institute, in conjunction with my able friend Dr. William H. Ford, a *slow-beat* plan of treatment (therefore denominated by us *bradycrote*). The November number of the *Charleston Medical and Surgical Review* contains a full and succinct statement of the success which attended this first employment of gelseminum sempervirens and veratrum viride, pushed to the verge of tolerance, in yellow fever.

In the year 1862 I was commissioned to the relief of Wilmington, N. C., by the Confederate War-Office in Richmond. The plan of treatment which I found most successful during that disastrous epidemic was in many respects similar to the one I am now about to describe. My report, a brief official statement of the duty performed upon that occasion, was duly forwarded to headquarters, and is doubtless among the host of other official documents seized and carried to Washington at the close of the civil war.

It is of prime importance that the genius of each individual epidemic should be thoroughly mastered, in order to decide upon a plan of treatment which is likely to prove most appropriate.

The disease in Savannah, though inflammatory at the offstart, became typhoidal when under way, owing to the ochletic cause above specified, and therefore great care was necessary to exclude remedies which had the slightest spoliative or depressing tendency.

Aware, from so large an experience with this treacherous malady, that it was absolutely impossible in the commencement to determine whether a case would prove mild or grave within twenty-four hours, I judged it most prudent to treat all alike with relentless energy. Every patient was, therefore, subjected to the same plan of treatment hereinafter detailed, deviations being made with great caution to suit special exigencies arising from habit, constitution, or idiosyncrasy.

Though the general outline of treatment was so nearly identical, the progress of each case was found full of sudden and dangerous contingencies to the end. In order, therefore, to conduct a patient in safety through his attack, constant vigilance, skill, and therapeutic resource were called into requisition.

The treatment which I practised with such success during the epidemic in Savannah can be summed up in a few paragraphs.

Absolute rest in the horizontal position was enjoined, and patients strictly required never to rise from their pillows for any purpose, due arrangements being made to avoid violation of this injunction.

Strict abstinence throughout the first stage was ordered. Now and then a mouthful of foaming seltzer, freshly drawn from a siphon, was allowed. Pellets of ice were permitted without stint.

When seen early after seizure, a hot foot-bath, to which turpentine had been properly added, was administered, and cloths wrung out of ice-water applied to the head. The pediluvium was repeated as often, throughout the first stage, as the exigencies of the case demanded its employment.

The treatment was always commenced by the administration of a single powder, consisting of half a scruple each of calomel and supercarbonate of soda, with twenty grains of quinine. This combination never failed to bring away, within a reasonable time, one or two evacuations, bilious and moderately consistent in character.

In no instance did the bowels exhibit any tendency to hypercatharsis after this dose. The use of the syringe was therefore often demanded throughout the subsequent management of the case.

The rate of the pulse was invariably diminished within from six to eight hours after the administration of this dose, though corresponding abatement of temperature did not as promptly ensue.

The very reluctant manner in which the temperature declined after this sudden reduction of the pulse was quite notable and characteristic. Instances of very protracted delay about this physiological manifestation were common; and, though the correlation remained at variance throughout the first stage, this did not appear to retard the progress of the case to final convalescence.

Frequent tepid spongings, practised over the entire body, so as to occasion no fatigue, materially reduced the parched condition of the skin, and proved most grateful.

The rachalgia, referred to as so torturing a symptom, always and promptly yielded to steady applications over the loins of flannels steeped in diluted whiskey and laudanum.

So soon as anguish in the back was allayed, croton-oil liniment was applied to excite the surface of the skin in its characteristic manner over the region of the kidneys, as I believe that these organs are gravely threatened from the commencement of the first stage of this fever.

Four hours after the administration of the first powder, ten grains more of quinine were placed dry upon the tongue with a pellet of ice; this dose was repeated every two hours thereafter during the persistence of the first stage.

The thermometer was used as the guide for continuing or abating the administration of quinine. As long as the temperature exhibited tendency to rise, or maintained a steady high rate, this medicine was persisted in, but, so soon as any decline in temperature was detected, the quantity of quinine was reduced one-half, and camphor, with a view to its diffusive stimulant and sudorific effect, was given in combination with it every four hours. This treatment was kept up until the thermometer indicated a normal temperature.

If the quantity of quinine was at any time reduced too soon, the temperature and pulse would surely rise, and it was always singularly difficult to recover that lost rate.

The quinine did not seem to disturb the stomach, and, even when nausea supervened, unremitting administration of this "calmant and tranquillizer," as Drake has so well termed it, would alone pacify the viscus. This result I am disposed to attribute to the fact that this alkaloid is a basic compound, and therefore uses up the peculiar acid known to be so abundant in the stomach throughout this fever, and which proves not only a direct source of irritation, but largely enters into the composition of black-vomit.

In no instance have I ever noted any corroboration of the views of Mialhe regarding the purgative effect of large doses of quinine.

Briquet has long since shown, by a laborious series of experiments, that quinine possesses the power to lessen the heart's action, while it also tended to depurate the blood; and, f the testimony of Dr. Hinckel, expressed before the American Medical Association some years since, is superadded, that his remedial agent, in sufficient doses, calms the nervous system, increases the capillary action, and promotes eliminating processes, so desirable from the kidneys, then is its administration throughout the various stages of this disease theoretically demanded.

In no stage of this fever did any one of the ammonia compounds agree. The system seemed already surcharged with his alkali; an observation quite in accordance with the well-known statements of Reuling, who detected ammonia in the breath in cases of low fever and albuminuria.

The special treatment above detailed, when instituted early lways tended to shorten the first stage, and also very materilly modified the severity, and absolutely abbreviated the suceeding stages.

In cases presenting hurried and oppressed breathing or ghing, the surface of the thorax was freely anointed with liniment composed of croton-oil, chloroform, and spirits of urpentine, in proper proportions, and this was applied every ree hours until an abundant efflorescence was secured.

Opium, in any of its various forms, was deemed dangerous and never given until convalescence was fully established, and then in great moderation. Hyoscyamus, lupulin, lactucarium, cannabis Indica, or bromide of potassium, were the only hypnotics which could be exhibited with any degree of safety during the several *stadia* of this disease.

After the first stage, purgatives of no description were admissible, and laxatives only of the blandest nature, in the form of enema, were employed, until health was quite reëstablished.

Blisters were very frequently required, and were resorted to with unfailing advantage. These were ordered in every instance promptly as soon as indicated, and were of no trifling dimensions. Mere redness of the tip or edges of the tongue with coating, unaccompanied by other symptoms, was not regarded as sufficient evidence of alarming gastric irritation; but the slightest tenderness on pressure over the epigastrium, or even eructation, after the first thirty-six hours, was looked upon as a definite cause for the immediate application of a blister over the entire abdomen. A neglect of this rule in the conduct of a case would surely place the life of a patient in jeopardy.

In case hæmorrhage threatened to take place from these surfaces during the subsequent progress of the case, it was controlled by proper dressings of fine tissue-paper, impregnated with styptics.

Stimulants were demanded early and throughout the progress of the case, and were essential during convalescence.

Every case entering upon the second stage which presented torpor of capillary circulation was put upon the use of turpentine in emulsion of gum-arabic with camphor, which acted most favorably.

With decided evidences of a decline about the pulse and temperature toward a healthy standard, nourishment was cautiously introduced. Thin chicken-broth or beef-tea was generally selected to begin with, and given by the small teaspoonful at stated intervals.

Milk invariably disagreed, even when combined with lime-water. All starchy compounds were forbidden, as they predisposed to flatulence. The stomach, even when acid, is usully devoid of gastric juice, and pepsin is found almost entirely bsent.

Especial attention was paid throughout to the function of he kidneys. They caused but little anxiety comparatively—ess than I have ever experienced in the course of similar epilemics. The urine, I noted, was frequently diminished in uantity about the third day, and, in two critical cases, supression occasioned alarm by a persistence of over sixteen ours.

Among the very last cases I saw was one in consultation vith my skillful friend Dr. Duncan, which presented, in the ourse of a dangerous attack of the fever, a remarkable charcter of urine. The patient was a young gentleman, native, n whom a protracted suppression was followed by discharges f highly-albuminous urine, which began a dark brown, beame gradually black as pigment could make it, passed hrough different shades of ocean-green, and finally faded off nto the natural hue, during a tardy convalescence. This case resented also black-vomit and soreness about the parotid lands.

I witnessed three deaths from sudden collapse, in consultaion with other physicians. In such cases remedies proved of o avail whatever to supply or arouse vital force; the powers f life ebbed away apace, with the nerve-energy alone exalted nder the influence of potent stimulants.

Black-vomit cases were rarely seen, and those exhibiting it ecovered with the rest, though by no means so speedily.

Recuperation was materially aided by the administration f muriated tincture of iron and daily use of Scott's bath.

During the critical *stadium* when dreaded black-vomit is nminent, the most trivial circumstance has been known to recipitate a crisis, and the nauseating odors of a sick-chamber t such a juncture may prove the exciting cause of this apalling symptom. The stomach, which the immortal Rush strongly characterized as "the throne of the disease," is lways more or less unsettled during an attack of this direful alady, and, when finally upset, demands consummate skill restore it to order.

There can be no doubt in the professional mind that certain chemical agents do possess the power to destroy the specific poison upon which zymotic diseases depend, and it is also highly probable that the fatal blow is struck at toxical influence, derived from ordure and other offensive material, when fetor, which is so overpowering an element about infection-carriers, is annihilated.

In consideration, therefore, of such views, and also that there yet prevails a doubt whether yellow fever, like cholera and typhoid fever, cannot be diffused by excreta from patients, the diligent employment of deodorizers and disinfectants about the persons and premises of cases under treatment should always be enforced, due precaution being taken to recommend the use of such chemical compounds only as tend to destroy odor without substituting another peculiar to itself.

In less than two weeks after the first recognized case of yellow fever, the disease had burst upon the terror-stricken community as a decimating scourge. So appalling was the mortality that the benevolent impulses of the nation were enlisted in behalf of this suffering city, and material aid of every kind flowed toward her in an uninterrupted stream. In rendering assistance, this great metropolis took the lead, and sustained her traditional character for generosity by munificent donations of money and supplies.

As soon as it became known, through our distinguished Fellow, Dr. Harris, that medical help was required to relieve the overburdened profession in Savannah, a meeting was promptly held by a large body of our profession at the hall of the Academy of Medicine, Dr. Purple presiding, and personal service from among their number was forthwith proffered.

In accordance, therefore, with a wish coming from the city of Savannah, acceded to by the profession of New York, I owe the honor and satisfaction of having rendered personal service to the city of Savannah during her recent calamitous visitation.

On the 14th day of November last, the great *pandemic* was declared at an end, but sporadic cases continued to occur in Savannah. The peculiar poison upon which the activity of this scourge depended seemed not yet to have spent its force, and before the year closed other valuable lives were demanded to fill up the measure of its wrath.

Even as the lingering fragments of a plundering and desolating foe continue to ravage and despoil after the hosts and heat of battle have passed away, so do the dregs of this ruthless poison often snatch unwary victims long after the main column of the invading pestilence has swept by in ghastly triumph.

Art. VI.—*A Further Contribution to the Treatment of Pertussis.* By P. Brynberg Porter, A. M., M. D., Attending Physician to the New York Free Dispensary for Sick Children, and for Diseases of Children at the Demilt Dispensary, New York.

Since the publication of my last paper on this subject (in he New York Medical Journal for October, 1876), having eceived a number of communications from medical men in reference to it, I am induced to add a few supplementary notes to the same.

Some members of the profession would have us believe hat there is no use treating whooping-cough at all, on the ground that it is a disease which gets well of itself, and that t is only necessary to interfere in its course when severe complications arise. The same argument would hold good in a large number of other affections, in which it is universally conceded that treatment is of service. Moreover, while the vast majority of cases of whooping-cough do recover, the records of vital statistics of this and other cities will show that no insignificant number of children annually fall victims to this disease. If it is claimed that death in these cases is usually due to complications, I would answer that the best way, in my experience, to avoid these complications is, to cut hort the disease, if possible, or, at all events, so alleviate its symptoms as to render it a trifling matter; for I believe that all authorities agree that severe complications almost invariably occur after the affection has lasted some time, when it has reached its height, and the paroxysms are of the greatest violence.

But, granting that pertussis does, as a rule, "get well of itself," is it not better to save the little patient weeks, and even months, of suffering, if it is in one's power? Not merely on the ground of preventing needless suffering, however, is it advisable to institute active treatment early. A severe attack of this disease is always debilitating, lowering the vitality, and rendering the system peculiarly sensitive to all influences which injuriously affect the health.

On this point Dr. J. Lewis Smith says: "Pertussis sometimes is attended with so much emaciation and loss of strength, in consequence of the vomiting, that intercurrent diseases, which, in favorable states of the system, would probably end favorably, are very apt to prove fatal." Personally I have found that, in those cases in which the disease has been allowed to run its course with little or no interference, it is almost invariably necessary to put the patient upon a long course of cod-liver oil and iron, or other appropriate tonics; while, in those in which prompt and active treatment has been faithfully carried out, this is far less frequently requisite. From the above considerations, therefore, I think it is reasonable to conclude that treatment is of service in pertussis.

At present I have no new cases of my own to add to those already published, but I have been recently gratified by the receipt of the following letter, which speaks for itself:

KENTON, OHIO, *February* 9, 1877.

DR. P. BRYNBERG PORTER—

DEAR SIR: Your articles on whooping-cough, in the NEW YORK MEDICAL JOURNAL for August, in 1872 and 1873, and October, 1876, made me think that you would, perhaps, like to get some further results of the treatment by chloral. Having had an epidemic of whooping-cough here this winter, I commenced the chloral-treatment at once, and have now treated two hundred cases with it. In every instance it was the mean of alleviating the symptoms and cutting short the disease; there being no case seen which was not the better for the treatment. The patient were from six months to twenty years of age, and there was not a single death among the two hundred. I could give you the cases in detail from my book, but this would be too long a task. The treatment was kept up for from two to six weeks, and there was only one case which lasted a long as seven weeks. In every case the cough was at once greatly alleviated, and in one hundred and fifty out of the two hundred it lasted only from two to four weeks. No other treatment was used, except in a few instances, where there was intermittent fever in addition to the whooping-cough, and in these the quinine-treatment was employed. Such results, I should think, would do much to make whooping-cough less of a terror to mothers than it has hitherto been, and I can sincerely thank you for bringing this treatment before the profession. As you know it always takes a long and a strong bookful to convert some of the "old fogies," you are entirely at liberty to publish the above, if you think fit, in connection with your own cases.

I have the honor to remain,

Truly yours,

C. H. Smith, M. D.

The admirable results here noted by Dr. Smith are the more satisfactory, as all the cases occurred in private practice, where they can be so much more readily followed out than among dispensary-patients.

I may say that, after a now very extensive experience in this affection, I have found chloral, on the whole, the most reliable and satisfactory agent that I have employed. It has the great advantage over quinine in solution (which, as I have elsewhere stated, I have also used with success) of not being unpleasant to the taste when given in sirup. I must confess, however, that I have not often met with the extreme difficulty in getting children to take quinine in this form, of which I have heard some others complain.

Chloral I believe to be a perfectly safe remedy if given with ordinary caution, and I have never known the slightest untoward symptom to be occasioned by its use in this disease. At present I am giving it to two infants of two months, one in private and the other in dispensary practice, and with excellent results in each. In one of these cases, where the paroxysms had previously been very numerous, they were at once reduced to two in the twenty-four hours. I would not advise commencing the treatment with large doses, but the quantity given can be increased with impunity, if we are to believe what is currently reported in medical journals of the Children's Hospital in Paris, when patients' teeth are to be extracted: "The nurse goes around at 8 A. M., and gives to each child under sentence from thirty to fifty grains of chloral hydrate. The dentist follows in one hour, and the child wakes up an hour or two afterward, and wonders what has become of its tooth." We have not got quite as far as that in this country yet.

Since the date of my last paper I have had no further experience with the ether-treatment, but Prof. Thomas informs me that he now treats his cases in the following way: The nurse is instructed to wear a cotton glove on the right hand, and, as soon as a paroxysm commences, to saturate it with ether, and clap it over the mouth and nose of the child; which, he says, has the effect of cutting short the coughing-spell. This procedure must be anything but agreeable to the little patient, and it would be almost impossible, I should think, to fully carry out the plan in many instances, especially at night, when the cough is always the most troublesome.

Some time since, before I had made trial of chloral, I was in the habit of prescribing belladonna in pertussis; but at last I gave it up on account of the unsatisfactory results which I obtained. This want of success may have been due to the fact that I did not use it in sufficiently large doses, since I notice that in a recent paper on "Anhidrotics," in the *Practitioner*, Dr. J. Milner Fothergill calls attention to the fact that Dr. Charles Kelly found that, in the treatment of whooping-cough, half an ounce of the tincture of belladonna in twenty-four hours could be safely taken by children of three or four years of age.

In conclusion, I wish to refer to an interesting phase of pertussis, which is not directly connected with the subject of treatment, but which may yet afford us some useful hints in regard to the latter. Shortly after my last paper was published, I received the following note:

CENTURY CLUB, NEW YORK, *October* 24, 1876.

DEAR DOCTOR: In the "Transactions of the New York Academy of Medicine," published in 1874 (page 319, meeting of May 15, 1873), is a paper, then read by me, on "Mortality in the Various States of the Union," in which I drew attention to the curious fact of the extraordinary preponderance of female deaths in whooping-cough. I had previously noticed the same fact in a report to the Board of Health. As you seem to be investigating the disease on a somewhat large scale, I mention this circumstance to you, as it might be interesting to learn whether a corresponding difference exists in the intensity and duration of the disease.

Yours truly,

CHARLES P. RUSSEL, M. D.

Up to the time I received Dr. Russel's communication I had never had my attention called to this subject; but since then (though the notes at present in my possession are far too few to base any general conclusions upon) my observations go to show that, of the children suffering from the disease who are ill enough to cause their parents to seek medical advice, a considerable majority are girls, and that, while only a trifle more than one-half of all the male cases treated can be classed as "severe," fully five-sixths of the female cases come under this category. As a rule, the physician is not called upon to treat the lightest cases of whooping-cough.

Art. VII.—*Some Remarks on Electrolysis in Ovarian Tumors.* By Dr. Frederick Semeleder.

I desire to place before the readers of this Journal a few supplementary remarks on the subject of electrolysis in ovarian tumors:

First of all, I have to state that the cases Nos. IV. and VI., mentioned in the first article I published in this Journal last June, have been completely cured, according to news I lately had from the city of Mexico. And now I wish to answer several questions I have repeatedly been asked:

1. What battery I use? I believe any kind of battery arranged for electro-chemical effects will answer. It makes no difference what substances the single element is made of, but there must be several smaller elements, and the positive pole of each element must be connected with the negative pole of the next following element, so as to form a chain. I have used zinc and copper elements (Callaud), and a zinc and carbon (electrolysis) battery (Leiter).

2. How many cells do I use? The electro-chemical power of a battery depends on the *number and size of the elements*, on the *quality of the exciting fluid*, and on the *extent to which the elements are brought in contact with the fluid.* Consequently the number and size of the elements do not convey an idea of the electro-chemical power developed. The way to measure the electrolytic quality of a battery is by means

of a voltameter, showing the quantity of water decomposed in a given time. My Callaud battery of twelve elements decomposes in one minute .03 cubic centimetre of common water acidulated with one drop of sulphuric acid to the ounce, while Leiter's electrolytic battery of eight cells decomposes in one minute .30 cubic centimetre.

3. How strong a current? I have only exceptionally applied the whole strength of the twelve Callauds. As a rule, I apply from eight to ten Callaud elements. This current is very well tolerated, and causes no pain when both poles are applied to the tongue. I am induced to think a stronger current unsafe; yet I know that considerably more powerful currents, and with very satisfactory results, have been used by all the physicians who have tried this method since I arrived here.

4. How long do I make the sittings? As a rule, I do not think it safe to extend each application beyond five minutes; yet I know that sittings of fifteen minutes have been given, and very good effects produced.

5. How often do I repeat the applications? I have stated that I used treatment every day, even during the menstrual period; and I am of opinion that, as long as there is no special contraindication, the same plan should be followed, otherwise too much time will be required to effect a cure.

6. Do I introduce both needles; or, if only one, which of the two poles, the positive or the negative one? I have stated that, generally, I introduce only one needle connected with the positive pole, and I think that the best plan, as the current will pass just as well through the liquid, only one pole being inserted, and as the negative pole gives more pain and is more likely to produce burning and sloughing.

7. Do I use isolated needles? I do not think it necessary to have my needles isolated, as the currents I use are mild enough not to make it necessary. My needles are of platinum or steel; I prefer the latter. They are three to five inches long, and of the size of a common knitting-needle, simply pointed. One needle being introduced, the other pole is applied to the skin with a sponge electrode, or with a metallic electrode, separated from the skin by a layer of blotting-paper saturated in salt-water.

I have stated above that considerably stronger currents than I used have been applied, and considerably longer sittings, and the results have been remarkably favorable.

I know that in one case a large cyst has disappeared after two sittings; another one after two sittings has been reduced to half its former size; in two cases after three sittings the circumference of the abdomen has been reduced by nine inches. Not being entitled to publish these cases, I must confine myself to this short notice.

I have had a very sad experience in one case, and this makes me more anxious that mild currents and short sittings should be used.

I lost a patient from peritonitis. She had a multilocular cyst of enormous size—fifty-two and a half inches in circumference; had been tapped twice, ten and two days before electricity was applied. In the first tapping forty-five pounds of a clear, yellowish, strongly salt, and slightly glutinous liquid were evacuated; in the second, the cyst first tapped was punctured again, and fifteen pounds more were removed; then, from the same puncture, another cyst was tapped, and eleven pounds of liquid were withdrawn, substantially like the first, yet a little more albuminous. Some fifteen to twenty pounds were left in the tumor. The liquid exposed to the action of the electric-current showed a rapid decomposition; on the negative pole a large quantity of gas was developed and an abundant quantity of foam was formed, while on the positive pole a kind of slimy coagulation took place.

After having had twelve applications the patient sank rapidly and died, having never complained of pain, but her pulse never having been below 86, and generally up to 100. The liquid in the two cysts tapped had reproduced rapidly.

The *post-mortem* examination showed peritonitis, which had evidently started from the point where once, in the only application of two needles in this case, I had the negative pole inserted, and during eight minutes a current allowed to pass capable of decomposing .15 cubic centimetre of acidulated water per minute. A sloughing was observed on the skin, about one-sixth of an inch in diameter, while at the positive needle there was a dry, brown, burnt spot, a little larger than the needle. The tumor had started from the left ovary. In several of the places where punctures had been made there were soft and slight adhesions; on the place of the first tapping was a spot of cicatricial tissue three-quarters of an inch in diameter.

In this case the electrolytic power employed was not extravagant, the time was not extraordinarily long, yet the effect was disastrous. The contents of the corresponding cyst were partly coagulated in the form of whitish threads and of a cloudy deposit.

This fatal accident certainly I greatly regret; but I relate it as it was, wishing my misfortune to prove a useful caution to others, and that, if there is any blame to be incurred, it may be cast on me, and not on the method. Yet it is but fair to say, what we only knew after the patient's death, that she was much older than we were aware of, and that she had been suffering from that tumor more than ten years. I must mention, too, that her general health was very poor indeed, and that we never considered her case a fair one.

Quite lately two interesting contributions have been published illustrating the matter in question: one by Dr. Friedrich Fieber, of Vienna, in the *American Journal of Obstetrics*, etc., October, 1876; and another by Dr. Ultzmann, in Nos. 42, 43, 44, and 46, of the Vienna *Medicinische Presse*, 1876. Both are very valuable, and must be read *in extenso*. The latter gives an unfavorable verdict, based on the author's experiments. His final conclusions call for a few remarks. He says:

1. Electricity is not a radical cure for cystic tumors. He states that returns occur. I do not doubt Dr. Ultzmann's experience; but mine is different from his. The first two of my cases are over a year and a half old, and I have not heard of a refilling of the cysts. My other cases are about one year old, and no notice of a return has been received. Only ovariotomy is quite a radical cure. Yet Dr. Ultzmann does not seem to advocate ovariotomy.

2. Electrolysis is nothing but a protracted method of painful puncture, by all means inferior to simple puncture, with a

trocar. That is a particular view, into the discussion of which I do not wish to enter at present; but I must be allowed to state that the method, as I practised it, has never shown itself to be a painful one.

3. Electrolysis is able to do more harm than good. This is certainly not a very serious objection; and, true as it is, it is certainly as true for everything in the world as it is for electrolysis. A poor match may as well start a great fire as light a small lamp.

As we see, Dr. Ultzmann is not an advocate of ovariotomy, and he seems to be more in favor of puncture, without saying whether he confines himself simply to evacuating the cysts or proposes to combine injection, etc., with puncture. Simple puncture is certainly not a radical cure for ovarian cysts, and not even for cysts of the broad ligament, because those, too, sometimes fill again. Injection is not a radical remedy, either, nor is it quite safe.

I see how much speedier, how much more attractive and mposing ovariotomy is; but that does not seem to me to be a sufficient reason to put aside another method which, I trust, by further inquiry and honest study, will soon take its due place in gynecology. The matter is started, and should now be put to a full test.

Translations.

The Hereditary Transmission of Syphilis. By Dr. M. Kassowitz, Attending Physician to the General Hospital for Children, Vienna. 1876. Translated for the New York Medical Journal by Milo A. Wilson, M. D., Clinical Assistant to Professor of Dermatology, Bellevue Hospital Medical College; late Attending Physician to New York, Northwestern, and Bellevue Dispensaries; Member of County Medical Society; Assistant Surgeon Seventh Regiment, N. G. S. N. Y., etc., etc.

(*Continued from February Number.*)

III. *Can a Non-syphilitic Mother give Birth to a Syphilitic Child?*—This cardinal question must also be studied from two points of view. The next inquiry, therefore, is, whether a healthy woman can in general carry a syphilitic fœtus, and give birth to a syphilitic child; and, further, whether a healthy woman, notwithstanding she carries a syphilitic fœtus, can also remain healthy, or whether she, as a consequence, becomes inoculated herself? It is evident that, in order to answer our principal question, whether heredity takes place through procreation or through the placental circulation, really only the first point is worthy of consideration, and the second, viz., the possibility of a retro-infection of the healthy mother, is of secondary importance. But it is equally clear that both questions are practically inseparable, and that the bare fact of the birth of a syphilitic child, from a non-syphilitic mother, admits of decision in both ways.

This fact is, according to my experience, which corresponds to that of the by far greater number of all observers, an incontestable and exceedingly frequent one. As it is, notwithstanding, still doubted and denied on many sides, and even up to the most recent time, it is incumbent upon me, on the one hand, owing to this opposition, and on the other on account of the fundamental importance of the subject, to furnish fully and circumstantially the confirmatory evidence, and to invalidate the arguments of its opponents. This evidence is divided into the direct, i. e., that founded upon fact, and the indirect, that derived from evidence considered as conclusive.

Direct Evidence.—The circumstance that women in whom syphilis is not recognizable have given birth either to children who immediately at birth show the symptoms of inherited syphilis, or to those who develop the same within a short time after birth, is affirmed by innumerable authors, and it would be utterly impossible to make mention of all who have written upon this subject. We can simply say that all authors who have studied this question defend the possibility of this occurrence, with the exception of the few whom we have designated as its opponents. We may name, however, a few of those who have made observations respecting this subject, and who declare positively that they have carefully and thoroughly examined into the state of health of the mother, and continued to observe the same during a protracted period of time.

After Swediaur (1801), who first defended the immunity of the mother, Bertin (1810) next gave a detailed history of the disease. Haase (1828) likewise furnishes a clear, trustworthy, and well-written report, of four successive syphilitic births, from an entirely healthy mother, whom he, as family physician, had repeatedly examined and closely studied during the whole time. Similar reports are to be found in Colles (1837) and Acton (1845). In 1848 a commission of Swedish physicians, after an investigation, especially in reference to the subject in question, decided that many instances could be cited in which the syphilis of the father transmits itself to the child without the mother becoming inoculated with the syphilitic virus, either before or during the period of pregnancy. Depaul (1851) reports the birth of a child afflicted with pemphigus syphiliticus from a perfectly healthy mother; the father, two months before the fecundation, having suffered from general syphilis. In 1851 F. Mayer published forty-nine cases of hereditary syphilis, in which, from an examination of the respective mothers, he found them to be perfectly well; apart from these, two other cases in private practice, in which the mother of syphilitic children was examined repeatedly, without finding any evidences of syphilis. Bednar (1853) says that in the Vienna Foundling Asylum he found twenty cases where the mother was afflicted with syphilis; as also ninety-nine other cases where the mother was healthy, or suffering from non-syphilitic affections. Of the latter, thirty-six remained in the institution as nurses, and suffered neither from primary nor secondary syphilis, although during their stay in the asylum their children became ill with hereditary syphilis. In thirteen out of twenty-three cases of hereditary syphilis, De Meric (1855) also found the mothers, at the time of labor as well as subsequently, to be perfectly well; the remaining ten were syphilitic. Bidard (1853), Maisonneuve and Montanier (1853), and Faure (1854), report like experience. In seventeen cases of hereditary syphilis, with diseased internal organs, Hecker could, in fifteen of the number, demonstrate positively the healthfulness of the mother. Trousseau (1855) constantly defended the possibility of a complete immunity of the mother, and gives the following case:

A young physician, who previously had had secondary syphilis, but was apparently cured, married a healthy young girl, aged seventeen, who, six months afterward, gave birth prematurely to a wretched-looking child, covered with pemphigus bullæ. A second child was born at term, but feeble, and with unmistakable symptoms of syphilis, while the mother was throughout, and continues to be, entirely well.

Parker (1863) gives most minutely three cases, in which men with latent syphilis married healthy women, from whom a number of syphilitic children were born, while the women, upon a careful examination immediately after the first labor, as well as later, presented no signs of syphilis. Three equally well-described cases by Drysdale (1868) are entirely analogous. In several cases of children with hereditary bone syphilis, Waldeyer and Köbner (1872) found the mother, upon the closest examination, to be entirely healthy, while paternal syphilis undoubtedly existed. Köbner (1864) himself had already in other cases verified this fact. Fränkel (1872) found fourteen out of seventeen mothers of children with congenital syphilis to be sound. In one case the mother died from some puerperal affection during labor, and a *post mortem*, especially made for this object, revealed no trace whatever of a syphilitic character. Parrot (1872) could find no specific lesions in a young mother, whose child was suffering greatly from pemphigus and bone syphilis, while the syphilis of the father was distinctly recognizable. Very recently Gingeot (1873), Kjellberg (1874), Woodman (1874), and others, reported like facts.

The number of similar references could easily be increased, I might say, to an interminable extent. In addition must also be mentioned that all those writers who acknowledge the possibility of a retro-infection of the healthy mother, yet consider it as not occurring in all cases — such as Ricord, Vidal, Hutchinson, Tyler Smith, and many others, who concede fully and also distinctly report that, in very many cases, the mother of an hereditarily syphilitic child was, and continued to remain, in a perfectly normal condition.

Before beginning the consideration of my own individual observations, I will give the figures bearing upon the condition of health of all the mothers of congenitally syphilitic children, taken from the reports of the Vienna Foundling Asylum:

	Hered. syph. Children.	Mother syphilitic.	Mother unknown.	Mother healthy.
1854	22	8	7	7
1855	20	9	6	5
1856	25	8	12	5
1857	18	4	2	12
1858	24	10	5	9
1859	18	5	6	7
1860	33	13	3	17
1861	37	5	9	23
1862	23	9	2	12
1863	21	9	1	11
1864	28	5	8	15
1865	40	13	12	15
1866	30	9	12	9
867	27	5	13	9
868	34	10	14	10
	400	122	112	166

These data are thoroughly reliable in so far as they relate o the syphilitic and non-syphilitic mothers. The former are rought from the lying-in to the syphilitic division, and the hild is transferred to the foundling asylum, as also the diag- osis of syphilis in its mother; the latter, after they have been roved in the lying-in ward as void of suspicion, are placed fter their confinement in the foundling asylum, and there gain scrupulously examined; and if, as is frequently the case, hey are retained as nurses, they are, during several months, ery closely observed, repeatedly and thoroughly examined. ince my attendance upon the lying-in and foundling insti- utes, now about a year, I have been able to thoroughly con- ince myself in relation to this through the evidence there resented, and have there seen, at least in twenty cases, hildren with the most perfect types of congenital syphilis, hile their mothers were often in a condition of splendid, we ight say blooming, health. In two cases, where the chil- ren were born with a specific vesicular eruption, the mothers, pon repeated examinations (made also during the middle onths of pregnancy), were found not only to be in a normal ondition of health, but syphilis in the fathers could also be efinitely proved.

If I now pass on to the consideration of my own investigations, I find a complete confirmation of the statements of the above-mentioned writers. Of the one hundred and nineteen cases which I have recorded, the conditions or circumstances of heredity were doubtful in but forty-three (and, in relation to a large number of these, I sacrificed my conscientiousness and included them, for the reason that these conditions—specific heredity—could be claimed with great probability); in forty-three of the remaining seventy-six cases, the mother was proved to be undoubtedly free from syphilis; in twenty-three cases both parents were affected, and in ten the mother alone.

By a careful observation, continued in the majority of the cases through many years, I became entirely convinced of the healthfulness of these women—apart from the indirect evidences which are later to be discussed and illustrated by examples. The mothers, highly gratified with the careful and, as we shall presently see, very generally successful treatment of their children, remained, almost unexceptionally, faithful to the institution during a number of years, and presented themselves there with their children at short intervals. The examination of their genital organs was of course the exception, not the rule, and this special examination really is of but slight importance, when made in relation to syphilis of many years' standing. On the contrary, a careful examination was made, almost every time, of the mucous membrane of the mouth, nose, and throat, of the easily accessible portions of the skin, especially the arms, hands, and palms, the scalp, the lymphatic glands of the neck, nape, and elbows, the cranial bones, clavicles, tibias, etc. I would add, further, that a single such examination, should it be devoid of result, still would not be a sufficient evidence of the absence of syphilis; yet it would be impossible to conceive of a latency existing in such a way that an individual, for instance, who for years was examined at intervals of from one to two months in the above-mentioned manner, and found to be exempt, could, nevertheless, be considered as suffering from this disease. Much more, rather, I have thoroughly convinced myself that in all cases in which the mothers of children which I have had under observation, were themselves affected with the disease, as in those cases also where I had the opportunity to see and examine frequently the fathers, also syphilitic, I succeeded, in every examination conducted in the above-given manner, in proving the existence of an undoubtedly specific symptom, in most cases even the coexistence of several; and that these, even under proper treatment, very frequently relapsed. It is still to be observed that all the mothers given above as healthy were positively without any specific treatment during the entire period of observation; and, therefore, the symptoms of an imaginary hidden affection were not, as we might say, suppressed through medical means. It is therefore at once inconceivable that syphilis, existing in an individual at no time under specific treatment, and subjected during many years to a continued careful observation, would remain absolutely undeveloped, and the robust health, the abundant growth of hair, etc., be not in the least altered, as was the case in the forty-three instances above mentioned.

In conformity to this, I would not hesitate to consider the good health of the mother in the above-given number of cases as proved simply from these direct observations alone; besides which, as we have seen, they coincide exactly with the innumerable observations of others.

This opinion is, however, very materially strengthened, exclusive of this, by the following considerations:

Indirect Evidence.—Non-disputed, chronic syphilis in the man, either latent at the time of marriage, or appearing only in non-inoculable symptoms.

Case I. *Father syphilitic Seven Years; Mother healthy; Child syphilitic.*—A stone-cutter, aged twenty-seven at the time of marriage, was inoculated in his twentieth year, and after the lapse of several weeks had a general eruption and ulcers of the throat; a year thereafter, persistent osteal pains, ulcers on the lips and upon the tongue, all of which disappeared after treatment with decoctions. Since then the genitals and surrounding parts have been free from specific lesions. At the time of his marriage he was apparently well, with the exception of a frequent recurrence of headache at night. His wife, aged twenty, was, according to his statement, a virgin at the time of marriage. She became at once pregnant, and in the middle of the ninth month gave birth to a feeble but seemingly healthy child, which throve remarkably at the mother's breast. When three weeks old he suffered from nasal catarrh, and in his fifth week there appeared a macular exanthema and papules upon the soles of the feet and heels. The father showed at this time nodes upon the frontal bones, very perceptible both to sight and touch, which vanished under the combined use of protoiodide of mercury and iodide of potassium. At the first examination, about ten months after marriage, the mother appeared to be robust and strong, with an abundant growth of hair, and absolutely no indications of syphilis. During the succeeding year I saw her almost every week, and found her always healthy.

Case II. *Chronic Syphilis of the Father, with, shortly after Procreation, an Eruption of Ulcers of the Skin; Mother well; Child syphilitic.*—A widower aged forty-two married a woman aged twenty-one in August, 1871. She became quickly impregnated, and noticed in the third month of her pregnancy that the entire surface of her husband's body was covered with ulcers the size of a half-kreutzer. The attending physician regarded these as an evidence of old syphilis, and treated the patient by inunction for two months, whereupon the lesions disappeared. In July, 1872, the wife gave birth to a boy at term, who, in the third week, became ill from a general eruption, which frequently relapsed in the form of papules upon the genitals and about the anus, and, later, of ulcers upon the lips and tongue. Several weeks after the birth of the child, the father, who since that time had again suffered from nocturnal headaches, died from pneumonia. During the whole period of pregnancy the mother felt entirely well; her confinement was normal. Three months after labor she was robust, of blooming appearance, the hair-growth abundant, and an examination made in relation to syphilis was entirely negative. She appears to-day, now four years since her marriage, and three years since the birth of her child, perfectly healthy, having been constantly seen at intervals of from one to two months.

Case III. *Syphilis in the Father of at least Eight Years' Standing; Mother healthy; a Succession of Three Syphi-*

itic Births, finally a Healthy Child.—A laborer aged thirty-hree, who was a soldier from his twentieth to his twenty-fifth ear, and who acknowledged that during that time he had een in the hospital on account of syphilis, but since then has een apparently well, married in June, 1867, a girl seventeen ears old.

First child, 1868.—Girl; full term; very feeble; had hen but a few days old an eruption, and died soon therefter.

Second child, 1870.—Boy; attacked in the third week ith a violent eruption, and died in the fourth month.

Third child, 1872.—Boy; became sick in the fourth week rom a macular syphilide, and died several days later from nflammation of the lungs.

Fourth child, 1874.—Boy; strong and robust, at present year old.

The mother, examined for the first time in the year 1870, hen three years after her marriage, and immediately after he birth of the second syphilitic child, was entirely healthy, f fresh, bright appearance and abundant hair-growth, correponding to her youthfulness. She is to-day, as then, free om every suspicious symptom, although since that time she as been seen and examined innumerable times. Her husand, whom I saw but once in the year 1870, and who shirked he treatment proposed for him, is, so far as known, well.

These typical cases accord in almost all respects with most the remaining cases. In forty-three cases, in which the other was found to be healthy, it could be definitely stated thirty-eight instances that the father before his marriage or ncubinage had had syphilis, and in five cases only had he ecome inoculated after marriage. The latter cases are obviusly so uncommon for the reason that, if the husband bemes diseased with a primary lesion during married life, the ife very rarely escapes inoculation (as will be shown later in ses where both are diseased). In these five cases it could readily explained through what circumstances the woman oided inoculation.

Case IV. *Father inoculated after Marriage; Mother reains healthy; a Series of Four Syphilitic Births.*—From

1865 to 1866 the father lived with his present wife as his mistress without her becoming pregnant. Called to the Italian campaign of 1866, he contracted primary syphilis in Italy; returned at once from there to the hospital, where he remained five months, and was treated internally and by inunction. Afterward, marrying this same woman, he was seemingly well, and continued so, according to his statement, until the present time, excepting occasional headache and sore-throat.

1. In November, 1867, his wife gave birth to an eight-months' still-born boy.
2. December, 1868, to a boy, still-born, nearly at term.
3. May, 1871, to a girl, upon whom there appeared in six weeks a maculo-papular exanthema, and a diffuse syphilitic infiltration of the skin upon the hands and feet, with ulcers about the ankles and nates. She was treated successfully.
4. In November, 1873, to a boy. In the sixth week he presented a slight macular exanthema; he was successfully treated, and has been well ever since.

Since the birth of the child in May, 1871, the mother has been until the present time under constant observation; is strong, hearty, and was entirely well both before and during this period of more than four years.

In the four other cases, the birth of one or more healthy children took place before the husband was inoculated with syphilis. The disease was contracted during a temporary separation of the husband and wife, and was, as in the above-described case, rendered inocuous, at least for his wife, by the treatment he received in the hospital. The subsequent succession of births took place then as follows:

CASE V.—*Inoculation of the Husband after the Birth of Three Healthy Children; afterward Two Syphilitic Births; Mother healthy.*

1. 1863.—A healthy child.
2. 1868.—A healthy child.
3. 1870.—A healthy child.

During the last confinement the father became diseased and was treated for two months in the hospital.

4. 1871.—A miscarriage at six months, child still-born.
5. 1873.—A delicate female child; it became ill within

sixteen days after birth with a violent coryza and a universal macular eruption of a strongly-marked syphilitic type; she recovered. The wife was then, and has since remained, perfectly healthy.

CASE VI.—*Father inoculated after the Birth of the First Child; Six Successive Syphilitic Births; Mother well.*

1. 1866.—Healthy female child; dies when three months old from intestinal catarrh.

After the birth of this child the father abandoned his mistress, became diseased, and apparently recovered; the woman, when they became reunited in 1868, remained free from disease.

2. At the end of the year 1868 an abortion, female, at five months.

3. 1869.—An abortion, female, at six months.

4. 1870.—A miscarriage at seven months, child still-born.

5. 1871.—A seven months' female child, which after a few days had a specific eruption, and died when four months old.

6. December, 1871.—A boy, born at the eighth month; within eight days he showed a macular exanthema, was cured, but at present is severely affected with rickets.

7. 1874.—A boy, born at term; fell ill when two months old with a very slight maculo-papular exanthema, and is at present well.

Both the other cases are similar. Several healthy children were followed by premature births, and then by living syphilitic children.

In twelve only of the remaining thirty-nine cases the series of births was begun by the birth of one or more premature or still-born children. In the by far larger number (twenty-seven) the succession began at once with a strong, viable, full-term child, which only some time after birth gave any visible evidences of syphilis, and which, as we shall see later, corresponded every time to syphilis of at least several years' standing, or actively-treated syphilis, in the parents.

This leads us to the second indirect evidence, viz.:

2. *The birth of a syphilitic, nevertheless a mature, viable child, argues against a recent (one to two years') non-treated syphilis of the progenitors.*

This statement, which we must here anticipate, is, if it be founded upon truth—and this will be proved later in the proper place—one of great importance in relation to the question with which we are now concerned. It confirms more than anything else those cases in which an elderly man, with confessedly chronic syphilis, marries a young girl, impregnating her immediately, and in which case the first child is born at term and viable, but at once becomes ill with a relatively-modified form of congenital syphilis (first to third case); that, in fact, under such circumstances, there could not exist an inappreciable syphilis of the mother, because, as we shall see, an inoculation of the mother of so recent date, if transmitted to the child (this transmission taking place before the disease in the mother is modified by treatment), would without exception produce as a result miscarriage and non-viability of the fœtus.

Further, through the above proposition, those cases are explainable in which the mother contracts a second marriage (or other sexual relation), and, after she had already given birth to healthy children by the first marriage, in the second she has a child, certainly syphilitic, but full-term and viable. This was observed seven times in the above-mentioned cases.

Case VII. *A Healthy Woman has, in her First Marriage, a Healthy Child, and two years thereafter, by a Second Husband, a Viable but Syphilitic Child.*—This woman, aged twenty-two, had by her first husband:

1. 1872.—A healthy boy, at term, which still lives and continues well.

This relationship was then dissolved, and she has lived for the past two years with a porter, aged thirty, who was formerly a soldier.

2. *September*, 1874.—A female child, at term, which seemed healthy for ten weeks, and then became ill with a macular exanthema, followed by a few papules. Through a brief course of treatment, it soon recovered, and the excellent nutrition of the child was in no way affected. The mother was and is perfectly well.

Here not only the viability of the child, but also especially the late eruption, and the very slight intensity of the child's illness (as will be likewise later proved), indicate chronic and considerably weakened syphilis of the progenitors. As, however, the mother had borne an entirely healthy child two years previously, she is upon this ground alone—apart from her quite negative condition—to be excluded from any share in the transmission of the syphilis to her child.

Likewise, in the remaining six cases, the birth of a mature and viable syphilitic child was preceded by the birth of one entirely healthy by a first marriage, and this circumstance also confirms here the correctness of the negative condition of the woman found upon examination.

3. *The birth of healthy children after spontaneous disappearance, or medical eradication, of the transmitting power of syphilis in the father.*

We must here take preliminarily into consideration a very important law, which, in the further course of this work, will be extensively discussed, viz., the law of the spontaneous subsidence, and, finally, the extinction of the transmitting power of parental syphilis. In consequence of this spontaneous subsidence we have succeeding severely diseased embryos, which succumb to the inherited affection even within the uterus, children which are viable, but which give distinct evidences of syphilis; then, again, those which become ill to a very slight extent only, and relatively long after birth; and, finally, children are born who remain entirely free from syphilis. This loss of the power of transmission is, however, not necessarily combined with a state of perfect health on the part of the progenitors. On the contrary, we observe very frequently that in just such persons symptoms of a decidedly tertiary character are manifested—periosteal lesions, rupia, gummy growths of internal organs, destructive bone-affections, etc.; while, beyond a doubt, all those symptoms which are capable of inoculating (consequently the so-called secondary symptoms) must have disappeared. If, now, a man with syphilis in an advanced stage marries a healthy woman, and begets one or more children, to whom this modified form of syphilis is still transmitted, and then, the transmissibility in him becoming extinct, healthy children are born, we can, from the circumstance alone in itself, infer that the woman, after two or more years of marriage, can bear healthy children, exclude any syphilitic affection in her; for, if she had been inoculated at the time of her marriage, it would have been impossible for her, especially without previous treatment, to have borne healthy children.

Case VIII. *Man syphilitic; Treatment of Long Standing; Woman healthy; at first a Child with a Slight Form of Syphilis, then a healthy one.*—A carpenter, aged twenty-four, who in his eighteenth year contracted syphilis, and was treated for many months in the hospital, begat with his mistress, aged nineteen:

1. A male child, born at term in February, 1872, which only at the end of the sixth week had a papular eruption, rhagades upon the lips, etc. He was cured.

2. *February*, 1874.—A boy, healthy at birth, and has remained so. He is at present still under observation.

Case IX. *Husband syphilitic; Treatment of Long Standing; Wife healthy; a Healthy Child follows the Birth of two Syphilitic yet Viable Children.*—A Hebrew peddler, aged twenty-eight, who contracted syphilis in his twentieth year, and had been repeatedly treated for the same, married, in the beginning of the year 1869, a girl aged twenty.

1. *October*, 1869.—Boy; in his third week gave evidence of congenital syphilis; recovered. Died, when six months old, from intestinal catarrh.

2. *October*, 1870.—Boy; became ill at the sixth week and was cured; no relapse.

3. *January*, 1874.—Boy; was born well and continues so.

The mother has been under continual observation, from November, 1870, until the present time, and gives no signs whatever of syphilis.

The same final conclusion in relation to the health of the mother can be admitted in those cases in which, after the birth of one or more products of syphilitic conception, the father *alone* goes through a thorough course of mercurial treatment, in consequence of which the power of transmitting the disease is temporarily or permanently suppressed, and the child immediately following is and remains free from syphilis.

Evans (1847): After a woman had aborted five times, the husband was subjected to a most thorough course of mercury, and the succeeding child was healthy.

Martinez y Sanchez (1855): A young man, eighteen months after a general eruption, which he believed to have been cured under a mercurial treatment, married a healthy girl, who one year subsequently gave birth to a child, which even when born was affected with coryza, and within the next few days had an undoubtedly syphilitic eruption, and died when eighteen days old. He was now thoroughly treated with mercury for two months. Soon after the termination of his treatment his wife became pregnant, and bore a perfectly healthy child.

Davosky (1867): Father syphilitic five years before marriage; the first two children presented undoubted evidences of syphilis (pemphigus, ozæna). Upon this the father was treated by inunction, and the succeeding births were of healthy children.

Similar cases are reported by Benjamin Bell (1873), Abelin (1868), Kjellberg (1872), and others.

I append here also a very interesting case observed by me in private practice:

Case X. *Well-marked Chronic Syphilis of the Husband; Wife healthy; after the Birth of Three Children, still-born, a Mercurial Treatment of the Husband followed by the Birth of a Healthy Child; subsequent to this, Tertiary Symptoms in the Father.*—A well-to-do citizen, formerly an officer, contracted primary syphilis in the year 1864, and was apparently cured of this and the secondary symptoms which followed; whereupon, in the year 1867, he married a young girl, aged twenty, of good family. She gave birth—

1. End of 1867, to a male child, at six months; still-born.
2. 1868.—A girl at seven months; still-born.
3. 1869.—An abortion at three months; male.

Upon the children externally there was nothing perceptible. In the winter of 1872–'73 the husband's body was covered with serpiginous ulcers. He was treated by an eminent syphilographer and his assistants (to whom I am indebted for information concerning the syphilis in this case), at first by inunction, then with iodide of potassium, and was in the spring of 1873 apparently restored to health. About this time his wife conceived for the fourth time and gave birth—

4. In January, 1874, to a full-term, healthy, and unusually strong female child, which, very soon after its birth, came under my care for dyspeptic difficulty (it was artificially nourished), and from that time until the present day I have had it under continual observation. At no time were there any signs of inherited syphilis. In the summer of 1873 the father was at "Jodbad Hall;" nevertheless, in the succeeding winter there appeared gummata of the skin and necrosis of the ethmoid and nasal bones; in the spring and summer of 1874 he was sent repeatedly to the Hall, and died there in midsummer, with evidences of miliary tuberculosis. His wife, who was not informed of the nature of her husband's illness, and upon this, as well as upon the causes of her miscarriages, is still uninformed, was, according to the assurances of the attending physicians, always well; she was, therefore, never under anti-syphilitic treatment, and has enjoyed for the last two years, during which time I have had frequent opportunity to observe her, the most perfect health.

This case, owing to the birth of a healthy child, also demonstrates, in the most positive manner, the immunity of the mother from syphilis.

Those cases also belong here, in which women, whose husbands suffered from chronic syphilis, bore syphilitic children without themselves becoming diseased, and who, after the birth of the first, with the second non-syphilitic husband gave birth immediately to healthy children. Observations like these, and others reported by Von Behrend (1849), and Deutsch (1851), prove then, again, that the women, notwithstanding their having given birth to syphilitic children in a first marriage, have themselves remained free from syphilis.

From all these innumerable observations, as well as from the final logical conclusions deduced therefrom, it becomes sufficiently clear that the birth of a child with hereditary syphilis from a non-syphilitic mother is not only possible, but is to be regarded rather as one of the most frequent occurrences.

Notwithstanding, there are still some writers, as we already nentioned in the beginning, who deny entirely the possibility of his occurrence ; and it seems therefore to be enjoined upon us, n spite of the already reported, almost overwheming facts, to resent fully the arguments of the opponents, and prove their oundness upon investigation.

After Hufeland, Vassal, Beyer, and others, had already, in ne beginning of this century, defended the doctrine of the ex-lusive transmission of syphilis from the mother, without its aving been particularly noticed, M. A. Cullerier, in 1854, gain came forward with the assertion that a non-syphilitic nother could never give birth to a syphilitic child ; and there-ith denied absolutely the direct influence of paternal syphilis pon the child. His arguments at that time were based, on ne one hand, upon several casual, negative observations, in hich men, syphilitic, begat with healthy women non-syphi-tic children ; and, on the other hand, upon the assertion that e himself had never seen a child with hereditary syphilis orn of a non-syphilitic mother. In his more recent work 866) the same cases and assertion are repeated, unchanged. he first run about as follows :

A man with a squamous syphilide, tubercles of the mucous embrane, ulcers in the mouth, crusts upon the scalp, alopecia nd swelling of the lymphatic glands, was treated for fourteen ays, until salivation was produced, with the protoiodide (five ntigrammes in twenty-four hours). He married shortly terward ; his wife became pregnant, and bore a healthy ild.

This and the remaining analogous cases prove, however, thing further than that a mercurial course, even at the ight of the disease, may set aside, even if only temporarily, e capacity for the transmission of syphilis. From other cases, ain, it appears only conjectural that a man affected with late tiary syphilis begets healthy children. Both these occur-nces have, however, long since been verified by good ob-vers, and agree entirely, as we intend later to explain in-tail, with our own experience. The other negative assertion pears certainly somewhat remarkable, even from a syphilog-pher of note, who undoubtedly, from this alone, has come t little in contact with healthy mothers. From a careful examination alone of the remaining works by the same author, it is apparent that this assertion must not be taken literally. In another article (1854) I find, for instance, the following case:

An *entirely healthy* woman, who had never been ill, gave birth, seventeen months since, to a still-born child, which appeared to have been dead for some time. She became pregnant for the second time, and bore a strong, apparently healthy child, which was immediately handed over to a nurse. With her it became feeble and miserable, had affections of the mouth, eruptions between the buttocks, etc. One month later it was apparent that the child was positively syphilitic.

The author has manifestly overlooked the fact that, in this statement, in which he, moreover, rejects explicitly the infection of the child by the nurse, he invalidates his own arguments. In the same paper he also states that he has four times seen children with congenital syphilis, suckled by their own mothers through a period of several months, without the mothers having become inoculated. Herein it is again also stated that the mothers were not syphilitic, and that nevertheless four syphilitic children had four healthy mothers. But when we read, further, that Cullerier had never yet seen pemphigus in children with hereditary syphilis (but had observed frequently *congenital* pemphigus in children of non-syphilitic mothers); that he, further, had *always* observed the eruption of hereditary syphilis at the end of the second or third month; that, in his experience, the papular form of hereditary syphilis was entirely exceptional—we cannot avoid the suspicion that the writer, exceedingly partial to his theory, was very rigorous in the diagnosis of hereditary syphilis, and overlooked, by way of example, the frequent cases of congenital pemphigus, and declared them as non-syphilitic.

Notta, Follin, and Charrier, in their writings upon this subject, which appeared soon afterward, followed exactly in the footsteps of Cullerier, without advancing anything new whatever. Notta (*loc. cit.*) gives seven cases, in which a man, syphilitic prior to, or also at the time of, the fecundation, procreated healthy children with a healthy woman. But there is nothing given, either as to the intensity of the disease or

nything relative to treatment. In four cases, which are an-
exed to these, men with syphilis have, with syphilitic women,
rocreated syphilitic children—which is, indeed, not very re-
narkable. Also, in Charrier's six cases, two are of the latter
ind, consequently quite irrelevant to our question; in the
our other cases everything in relation to the stage of paternal
yphilis, and to its treatment, is omitted.

Oewre investigated this question in a similarly radical way,
ust like these his predecessors. The materials upon which
e bases his conclusions exceed the others only in amount, and
un exclusively over similarly negative ground. He also de-
ies that the semen of a syphilitic father can have any influ-
nce upon the offspring, and believes, therefore, that congeni-
l syphilis always arises from the syphilis of the mother only.
or the confirmation of such a contradictory assertion, dia-
etrically opposed to the definite observations of all others,
e should also expect at least the following positive facts to
e given as a basis: That the writer should communicate the
ases of hereditary syphilis observed by him, describe the dis-
se of the mothers, with all its symptoms, intensity, and du-
tion; state the influence of the disease upon the successive
ildren; and, finally, state his experience as to the origin of
e syphilis in the mothers, whether and when they were
oculated by their own husbands, or whether they were
ready syphilitic at the time of marriage. In the three arti-
es by Oewre there is nothing whatever to be found in relation
this. But we are told again, however, that in twenty-four
ses men who had been syphilitic were afterward married
d procreated healthy children. Here, also, the most im-
rtant data are wanting, and we remain completely in the
rk as to the course of the disease, the treatment, as to any
re or relapse, and as to the condition of the father at the
ne of procreation. We learn that two, three, five, seven,
ght, and nine years had elapsed between the syphilitic
fection of the father and the birth of the healthy child; the
ngest intervals in these cases being by far the most frequent.
the objection bordering upon this, viz., that in just these
ses the syphilis of the fathers was cured, Oewre replies by
ying that he rejects the possibility of the cure of syphilis.

But this assertion, beyond question, contradicts entirely the results of general experience, which acknowledge that "syphilis *can* be entirely cured, and indeed in a comparatively short time, as it is now undoubtedly proved that a second inoculation can take place, even but a few years after the first" (Bäumler). But, without regard to this, we have already learned, and shall prove positively in its proper place, that a mercurial treatment of syphilis in the parents has a remarkable influence upon the heredity; that the power of transmission will, even without treatment, gradually lose itself; and that the heredity in pronounced tertiary forms (and such forms are referred to in several cases of Oewre's) very often does not take place. Meanwhile, Oewre defeats, unwittingly, this his own argument, in the most perfect manner, with the nineteenth case of his first treatise (page 13):

A woman is inoculated by her husband at the time of conception, and aborts in the fifth to the sixth month. One year and a half, also six years thereafter, she gives birth to healthy children. (No statement whatever is made relative to treatment.)

If, consequently, a woman who has contracted syphilis can give birth one year and a half afterward, and still later, to healthy children, it proves that also in women (in whom there is no doubt of the power of transmitting syphilis) this power itself may disappear, even after a short time, either spontaneously or in consequence of anti-syphilitic treatment. It is, then, incomprehensible why, in men, this disease, or at least the power of transmitting the same, cannot equally disappear, especially after the lapse of five, eight, or nine years. For this reason, those cases in which a father, who had been syphilitic, and who, after the lapse of this number of years, had procreated healthy children, prove absolutely nothing, if produced even in still larger numbers, against the possibility and frequency of the inheritance of syphilis from the father.

A further argument of Oewre's is to the effect that, in those cases in which not only the mother is syphilitic, but the father also, an accumulative operation of both is wanting, because the condition of the fœtus appears entirely as if the mother alone was syphilitic. This assertion is simply stated, ithout the slightest attempt being made to verify the same y facts, as is generally the case in the many observations iven by Oewre, in which we have none at all, or only the ost scanty details, upon the condition and fate of the emryo. But, without regard to this, such an assertion is, ken in the abstract, impossible to prove, because it lacks ery point of comparison, and no one can say, in any special se, how great would have been the intensity of the disease ad this or that condition been different; moreover, we shall ill have opportunity, in the course of this treatise, to demonrate how such an accumulative action, even if it cannot be roved in a single case, may still, in greater numbers, become solutely undeniable.

The innumerable definite investigations, which prove the ssibility of the immunity of the mother, are disposed of in ief by Oewre with a doubt as to their reliability; he possses, at the same time, sufficient self-denial to place in doubt, order to *favor* his theory, the correctness of five other obrvations, which he made partly himself, and took in part om the records of his hospital; in these cases, also, the imunity was undeniable, corresponding to the experiences of hers who have investigated this subject.

We must, therefore, in view of the exceeding feebleness of e opposing facts, and the slight, very inadequate proof of eir contradictory arguments, abide by our opinion *that the ssibility and great frequency of the birth of syphilitic chilren from non-syphilitic mothers are fully established.*

We will content ourselves at present in pointing at the eat importance inherent in this sentence, relative to the desion of the principal question—heredity through the cells propagation, or infection by means of the placental circulaon—and, in the mean while, shall postpone until later our ore detailed conclusions. Here, however, is the most approiate place to bring at once into consideration the further estions relating to the condition of health of the mother.

Clinical Records from Private and Hospital Practice.

I.—*A Typical Case of Traumatic General Emphysema.* By Eugene Beach, M. D., Gloversville, N. Y.

On the 16th of December, 1876, a boy aged eight years was standing upon a barn-floor, when a pitchfork descended from a hay-mow, tines foremost, and one tine of the fork penetrated the trachea of the boy, almost in the middle line, but a trifle to the left of it, and an inch and a half above the top of the sternum.

On visiting the boy about three hours after the accident, I found him presenting almost the exact appearance represented in the engraving on page 409, vol. ii., of Gross's "Surgery" (fourth edition, 1866). The distention of the body was enormous, the color of the lips was purple, respiration was rapid and labored, and the patient was rapidly becoming asphyxiated.

The wound of the trachea had not closed, while that of the softer superficial tissues had, and, as a consequence, air had escaped into the loose areolar tissue under the skin, and had made its way into this tissue over the whole body.

I quickly made several incisions through the skin on different parts of the body, which gave great relief from the pain caused by the extreme distention.

The next step was to give permanent relief. This was accomplished by opening the tissues of the neck, down to the perforation of the trachea, in the same manner as in tracheotomy.

This opening was left gaping. On visiting my patient eighteen hours afterward, I found the perforation of the trachea closed, and respiration going on normally. I was informed by the attendants that air ceased to escape through the opening *eight hours* after the operation.

Nothing remained to be done except to close the externa opening.

The air which had filled the areolar tissue disappeared very slowly, crepitation being distinct on the top of the head eigh days after the accident.

Notes of Hospital Practice.

ST. FRANCIS'S HOSPITAL.

Passage of Drainage-Tubes into the Cavity of the Pleura; Renoval by Exsection of the Rib.—An interesting case of removal f drainage-tubes from the cavity of the pleura, by means of xsection of a portion of the eighth rib, is at present under reatment at this hospital. The history of the case is as folows: A man, aged thirty, had an attack of acute pleurisy, vhich was treated by aspiration. After aspiration had been erformed twice, the fluid became purulent, and the resulting mpyema was treated by making a free incision and inserting drainage-tube. The patient was under observation in the ountry, and from the history furnished by him it would seem hat the tube slipped into the pleura. Another tube was then sed, and met mith a similar fate. An attempt was made t removal after the second tube had passed within the leura, but without success. A third tube was then inserted, nd the patient sent to hospital. On admission, January 5th, the left side was found to be retracted to the extent of n inch and a half, and the ribs so closely approximated that n exploratory operation would be impossible without removng a portion of the rib. This was performed by Dr. J. H. ipley, who made an incision about three inches long, beginning at the original opening and extending inward on a line ith the nipple. A portion of the eighth rib was then reoved by means of a drill and bone forceps, and a perforation ade sufficiently large to admit the little finger. A polypus rceps was introduced, and a drainage-tube detected posterior nd superior to the opening: further search with this instruent proved unsuccessful, and it was substituted by one of mmet's flexible silver probes, so bent at the extremity as to rm a hook.

The cavity of the pleura was then explored with this inrument, and, after a search lasting twenty minutes, the secnd tube was withdrawn. The tubes were in good preservaon, and each measured seven inches in length. After the operation the patient did well, and at present gives promise of a speedy recovery.

CHARITY HOSPITAL.

General Peritonitis caused by Suppurating Bubo.—A boy, aged nineteen, entered the venereal service of the hospital, with a bubo which was in the stage of suppuration. He was subsequently transferred to the medical wards on account of disease of the lungs. While under observation there he developed general peritonitis, and died after about a week. At the autopsy it was found that the abscess caused by the suppurating bubo had extended down to the peritonæum, and in this manner served as the starting-point of the peritonitis.

Abscess below the Diaphragm, the Result of Disease of the Lungs.—A rare case of abscess between the diaphragm and right lobe of the liver occurred in a case which recently died in this hospital. The history was as follows: A woman, aged fifty, entered January 23d, stating that she had been suffering from pain in the right lumbar region for two weeks. A physical examination showed dullness below the third rib on the right side, anteriorly. In the epigastrium a protrusion like a hernia was felt, which was tympanitic on percussion. This tympanitic resonance extended downward and toward the left lumbar region. There was no similar tympanitic resonance over any other portion of the abdomen. The patient died on February 1st. At the autopsy the lower lobe of the right lung was found consolidated by acute catarrhal pneumonia, and at the base was a small gangrenous cavity, the size of a hazel-nut, which perforated the diaphragm and formed an abscess between the diaphragm and right lobe of the liver. The entrance of air into the abscess through the cavity in the lungs had given rise to decomposition and the evolution of gas, and in this manner furnished signs of tympanitic resonance over the upper portion of the abdomen.

The pyloric extremity of the stomach was attached to the abdominal wall.

The peritonæum showed no signs of inflammation. The ver was diminished in size from the pressure caused by the bscess. The case was of considerable interest as proving ie result that may follow a cavity in the lungs, and also ie difficulty of making a correct diagnosis.

MOUNT SINAI HOSPITAL.

Pott's Disease, with Paraplegia.—The rarity of paraplegia om compression on the cord in caries of the vertebræ makes ie history of the following case of interest: The patient, a irl, aged seventeen, was admitted to hospital suffering from lvanced caries of the dorsal vertebræ, with paraplegia. She ys that, when she was six years of age, her mother noticed iat a small knuckle made its appearance on her back, and r this she was brought to a dispensary for treatment. The agnosis of the case was without difficulty made out, and a ace was adapted to the child. The chafing caused the irents to discontinue the use of the brace, and allow the sease to take its own course. The condition of the child itil she was ten years of age was such as to allow her to to school and enjoy average health. Paralysis of the wer extremities occurred about this time—four years after e disease was first detected. It made its appearance while e child was sitting on the door-step, and not engaged in y exercise. This paraplegia has continued up to admis- in to hospital, and within the past few months abscesses ve developed in the region of the nates. The deformity very marked, and is caused, apparently, by disease of the rsal vertebræ, extending from about the third to the tenth. ie point of interest in the pathology is that, in all prob- ility, compression took place by some of the diseased ver- iræ sliding backward and pressing on the cord, and, inas ich as the child was not making any exertion, it is fair to ume that, while sitting on the door-step and playing, she idvertently stooped forward and pressed the carious verte- e backward, causing compression. The point of most in- est is in regard to treatment. If, at the time the disease s first detected, a plaster-of-Paris bandage had been applied the deformity would have been prevented, and the advantages would have been that, in all probability, no chafing would have attended its use; and, secondly, it could not readily have been removed at the whim of the patient or patient's friends.

At the present time, in this city, there are a large number of cases of progressive deformity, resulting from caries of the spine. In the majority, if not in all of them, braces have been adopted and discontinued for reasons best known to the patients' friends. Some cases of this class have come under our observation, and, on inquiring why the apparatus was discarded, we were informed, in one case, that vermin was found on the brace, and, to remove the vermin, the brace was destroyed and never replaced. In another case, the complaint was, that the irritation was so great that it could not be endured. Both of these cases were directed to an institution where the plaster-bandage would have been applied, but they never made their appearance. One of the cases was revisited, and again promised to apply for treatment, but the promise was not kept.

Morbus Coxarius, with Dislocation of the Head of the Femur.—A man entered hospital suffering from the third stage of hip-joint disease. He had been an inmate of other hospitals, but no operation had been performed on him for the removal of the diseased joint. On admission, there was found to be considerable motion in the joint, with marked shortening of the affected extremity. No operation was performed beyond evacuating a large abscess which was connected with the joint. Some time afterward the patient died of exhaustion, and at the autopsy it was found that the head of the femur was nearly completely eroded. The cavity of the acetabulum was roughened, and the margin had nearly entirely disappeared. The remaining portion of the head of the femur had become dislocated, and formed a new articulating surface above the acetabulum.

Proceedings of Societies.

ATHOLOGICAL SECTION OF THE KINGS COUNTY MEDICAL SOCIETY.

Stated Meeting, September 28, 1876.

DR. WYCKOFF in the Chair.

DR. MATHEWSON presented a brain, with the following istory :

Mrs. A., aged forty-eight, German, somewhat corpulent, d in fair health, with no history of previous illness, was lmitted to the Brooklyn Eye and Ear Hospital June 21, 76, for the purpose of undergoing iridectomy for artificial pil, which operation was performed on the afternoon of ne 21st, Squibb's ether and apparatus being used. The tient was under ether but two minutes, having taken the æsthetic without struggling, and began to recover from its ects as usual, but quickly became comatose and cyanotic, d could not be aroused. After some hours, became sufficiently sensible to understand questions, but developed left miplegia, and died in thirty-seven hours.

The right lateral ventricle was found full of blood from æmorrhage into the optic thalamus, which was almost enely broken down; a smaller, independent hæmorrhage was nd in the left ventricle. The cerebral arteries were very eromatous.

Dr. Mathewson remarked that this patient did not struggle the least under the ether, and that the fatal termination s therefore the more remarkable.

Dr. SHAW, who conducted the autopsy, had failed to find microscopic cerebral aneurisms often found in such cases.

Dr. SEGUR could not consider this a death chargeable to er. It was purely an accident.

Dr. SCHENCK presented a specimen with the following tory :

A. B., aged sixty-three, has had a long series of recurrent nors removed from the side and back of the thorax : the first in Dublin, fifteen years ago; the last three at the Kings County Hospital, in 1872, 1873, and September 21, 1876. They are all supposed to have been Paget's "recurrent fibroid."

Dr. Schenck also presented a photograph of a woman, the subject of elephantiasis of both lower extremities, of eighteen years' standing. It was remarkable that the vulva was unaffected.

Dr. Rushmore presented a brain, with the following history:

Patrick Farrell, aged forty, was first seen May 15, 1876. He complained of pain in the head for four days, and had been dizzy for three weeks. Was found to have left ptosis, and partial anæsthesia of the same side of the face. His hearing was, for the voice A. D., six inches; A. S., twelve feet. On May 22d he was much worse, and staggered. At this time three small red spots were noticed in the membrana tympani on the left side, supposed to be hæmorrhages, which gradually disappeared. He complains of slight pain in the left eye, in which ptosis still exists. T. is normal, and V. is about one-half. Both eyes are injected and suffused. Pupils normal. Ophthalmoscope shows marked choked disk O. D., measured by + 6. Fundus O. S. normal.

Being admitted in this condition to St. Peter's Hospital, a retinal hæmorrhage quickly developed below the disk O. D., all the symptoms were increased, and about the 10th of June choked disk O. S. appeared, but not as marked as O. D. The left facial paralysis became complete, and the right side also became affected. On the 15th paralysis of the sphincters appeared, and on the 20th of June he died.

At the autopsy, contrary to general expectation, there was found neither meningitis, effusion into the ventricles, nor *large* tumor. After careful search, a small, bean-shaped mass was discovered at the location of the left Gasserian ganglion, which was either hypertrophied or replaced by a morbid growth.

Dr. J. C. Shaw believed it to be a neoplasm, although he had never seen so small a tumor produce so much mischief From the symptoms he should expect to find other lesions perhaps microscopic, and probably in the pons.

Dr. Rushmore, in reply to questions, said there was no syphilitic history. The patient died comatose, with slow and labored breathing.

Dr. Schenck had seen a large tumor, which lay over the cribriform plate of the ethmoid, and had produced no marked symptoms during life.

Dr. Mathewson said that the *rationale* of the production of choked disk was ill understood. In this case it was clearly not the result of pressure; perhaps the vaso-motor nerves were concerned.

Dr. Mathewson also presented a specimen of necrosis of he temporal bone, removed from a young man who was first een July 1, 1876. He had had chronic suppuration, folowing scarlatina, for years, and had done nothing for his ear. Since May 1st there had been no discharge, and he was complaining of pain and mastoid swelling. He was treated, but did not return till the 15th of July, when he had severe headche, was stupid, had the right pupil contracted and the left upil dilated. He was immediately admitted to the Eye and Ear Hospital for intracranial disease, and died suddenly, on he 18th of July, after four hours' coma.

At the necropsy, basilar meningitis, necrosis of the temporal bone, and a large abscess in the left middle lobe of the erebrum communicating with the suppurating mastoid cells, were found.

N. B. Sizer, M. D., *Secretary.*

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 24, 1877.

Officers for 1877–'78.—Dr. E. G. Janeway, President; Dr. . L. Keyes, Vice-President; Dr. Geo. F. Shrady, Secretary; rs. Geo. F. Shrady, John A. McCreery, and T. E. Satterwaite, Microscopical Committee.

History of the Patients at the Hospital for Epileptics and aralytics, who died in a Comatose State.—Dr. Finnel presented everal gall-stones which he had taken from one of the paents that had recently died at the Hospital for Epileptics and Paralytics. They came under the observation of Dr. Finnel at the Morgue, where they passed into the care of the coroner, for investigation. The first case showed nothing abnormal. The stomach was, however, removed for chemical analysis. One of them gave evidence of bronchitis; another had a spiculum of bone pressing on the brain, but no history during life pointed to any cerebral trouble. Dr. Janeway said that he knew something of the history of the cases referred to by Dr. Finnel. Four patients of the Epileptic and Paralytic Hospital became unconscious and died within forty-eight hours, from symptoms which pointed to either malaria or a narcotic poison as the immediate cause of the fatal coma. The cases presented similar symptoms, and were characterized by a slow pulse, pupils not contracted, and coma. There were no evidences of cerebro-spinal meningitis. At the autopsy, the brain, the bronchi, and the lungs, were congested. Dr. Janeway was of the opinion that the cause of death was some narcotic poison, and from the evidence which the cases furnished he thought that the symptoms and the pathological condition could be better explained by poisoning by picrotoxin than by any other agent. He did not think that malaria would be liable to produce sudden and fatal coma in this portion of the country and at the present season of the year.

Hæmoptysis.—Dr. Finnel also presented a right lung which he had removed from a patient thirty-seven years of age, who died of bleeding from the lungs. The history of the case was imperfect, but pointed to occasional attacks of hæmoptysis, due possibly to phthisis. He had been seen by different physicians, but in no case had a correct diagnosis been made out. He was a member of the city Fire Department, and, on suddenly jumping out of bed, bleeding came on, from which the patient died on the subsequent day. At the autopsy, the lung was found to be in a state of fibroid induration, without any special evidences to point to the fata hæmorrhage.

History of a Case of Lumbo-Colotomy living for Three Year after the Operation had been performed.—Dr. Horatio Bridg presented the rectum and a portion of the colon of a patien upon whom lumbo-colotomy had been performed three year reviously. The cause of death was Bright's disease. The atient was first seen in 1874, and at that time was thirtyight years of age. During 1868 she contracted two chanroidal sores in the vagina, which healed in two weeks, but vere followed subsequently by piles and a protrusion of the nucous membrane of the rectum. The piles were not ulcerted, and were not removed. When she was seen in 1874 a arge fissure of the anus was noticed, which extended upward or an inch. No symptoms of syphilis could be discovered, ut it was considered advisable, however, to place the patient n anti-syphilitic treatment. The fissure of the anus was reated by dilatation without effect, and subsequently by local pplications. A stricture of the rectum was also discovered. he was subsequently in different hospitals, but obtained little enefit from treatment. During July, 1874, lumbo-colotomy as performed. The usual operation was performed, and an ncision an inch and a half in extent made in the bowel. No ifficulty was experienced in finding the colon. After the opertion, the patient did well, and in five weeks the artificial nus was healed. Following the operation, there was a marked nprovement in the rectal ulceration, and some time afterard she was discharged. At different times she was an nmate of hospitals, and eventually died of Bright's disease. eath occurred about two years subsequent to the operation. n examination of the specimens showed that the ulcerations bove the sphincter were completely healed. The stricture as still of small calibre. The artificial anus was still perorate.

Dr. Briddon reported in regard to a case of malignant isease of the rectum in which he removed the cancerous nass, and which he recently presented to the Society. Folowing the operation of excision of the rectum, the mucous nembrane receded from the anus, although considerable care as taken to retain it in position by means of sutures. Morever, the malignant disease had returned, and would in all robability result in stricture. He was of the opinion that ventually the operation of lumbo-colotomy must be perrmed.

Gangrene of Pleura and Necrosis of Rib.—Dr. E. G. Janeway presented a specimen of lung of a patient whose case had some interesting points regarding diagnosis in diseases of the chest. The man had been admitted to the surgical ward of Bellevue Hospital, suffering from a scalp-wound, which was the result of an epileptic attack. It was noticed, however, that a diffused redness existed over the back, caused apparently by suppurative cellulitis; and, moreover, crepitation could be detected. On examining the chest, fluid was suspected to be present, but on introducing an hypodermic needle no fluid was obtained. It was used again, and a few drops of pus withdrawn. The chest was subsequently aspirated, and quite an amount of pus withdrawn. Dr. Janeway saw him on January 17th, about ten days after admission, and at that time there was found to be absence of breathing over the lung on the anterior part of the chest. On agitating the patient, the succussion-sound was heard. The patient died two days subsequently, with typhoid symptoms. At the autopsy, there was found gangrene of the false membrane, with necrosis of the eighth rib near its articulation with the vertebræ. Neither during life nor after death could any communication be found between the bronchi and pleural cavity, and the only explanation of the presence of air was afforded by the presence of the gangrenous false membrane, which in all probability caused decomposition and formation of gases. About a quart of fluid was found in the pleura. Dr. Janeway said that he had frequently found the hypodermic needle ineffectual to remove fluid from the chest, and believed that such failure was due to the imperfect suction-power of the instrument. He had also failed to obtain any fluid through the aspirator, though it was proved to be present by making an incision through the chest-wall.

Stated Meeting, February 14, 1877.

Dr. E. G. Janeway, President.

Epistaxis and Catarrh of the Nasal Passages, the Result of a Foreign Body in the Nose.—Dr. Beverly Robinson presented a button which he had removed from the nose of a girl aged four years. The mother said that the child fell on her nose, and subsequently had attacks of epistaxis and catarrhal discharge, which occurred at intervals during a year. When the nose was examined by the rhinoscope, a foreign body was detected, which after removal was found to be a button covered with calcareous matter. After the removal of the button the other symptoms disappeared.

Polypus of the Uterus.—Dr. Robinson also presented a specimen of fibro-cellular polypus which he had removed from a patient at Charity Hospital. The woman was forty-five years of age, and for the past ten years had lived away from her husband. She had in the early part of her life several miscarriages. Six months ago uterine hæmorrhage came on, and continued with but slight intervals. Medical treatment had been used previous to the diagnosis of polypus, but with little benefit. On examining the uterus, a polypus was detected in the cervix, and was removed by means of the *écraseur*.

Treatment of Enlarged Glands.—Dr. Burchard presented to the Society a girl eighteen years of age, who had an enlarged gland on the right side of the neck, and said that the case formed one of a large number which were under treatment at one of the city dispensaries. Dr. Burchard wished to know the opinion of the Society in regard to treatment, as he had found that but little benefit followed any special plan thus far tried. The case presented to the Society had improved more under the iodide of iron and cod-liver oil than anything else. He had used hypodermic injections of alcohol, acetic acid, iodide of potassium, iodide of sodium, iodine, bromine, carbolic acid, and water, and found that they proved of but little benefit. The injections of water seemed to be of most benefit.

Dr. Satterthwaite said that he had also tried the use of injections with the hypodermic syringe, but with little benefit.

In answer to a question from Dr. White, Dr. Burchard said that suppuration was an unusual result.

Dr. Janeway said that it was an important point in the class of case referred to that the cause, if possible, be made out. He had found that a carious tooth, an otitis, or other irritation, might be the commencement of the enlarged gland.

Bronchocele.—Dr. Burchard also presented a case of enlarged thyroid gland, and wished some suggestions in regard to treatment. The patient was a man about fifty years of age, and the gland was enlarged to such a degree as to hang over the sternum. The bronchocele had been latterly increasing in size, and causing a certain amount of dyspnœa and difficulty in swallowing.

Dr. Weir suggested that in all probability it had undergone cystic degeneration, and, if so, the method practised by Dr. Morrell Mackenzie might be of advantage. The treatment referred to consisted in the introduction of a canula, and the injection of a solution of the chloride of iron. The canula should not be withdrawn for several days.

Rupture of Bladder; Retention of Urine in the Areolar Tissue.—Dr. R. F. Weir presented on behalf of a candidate an interesting and unique case of rupture of the bladder. A man, aged fifty-eight, entered the Chambers Street Hospital, on February 5th, with retention of urine lasting for forty hours. A catheter was introduced without difficulty, and an ounce of bloody urine withdrawn, but it was evident, from the dullness extending upward toward the umbilicus, that a large amount of urine remained unvoided.

An aspirator-needle was then introduced, and two pints of urine removed. The patient felt so relieved after the urine was removed that he insisted on going home, but returned in twenty hours to be again aspirated.

When the aspirator-needle was in position, a sound was introduced into the bladder, but they could not be made to touch each other. Subsequently milk was injected into the bladder, and was returned through the needle of the aspirator. Dr. Weir saw the patient on February 11th, when he had developed peritonitis, which proved fatal on the following day. At the autopsy an opening was found on the anterior surface of the bladder, at its apex, which led into a cavity formed by the connective tissue. The prostate was enlarged, and there was also hypertrophy of the walls of the bladder. The solution of the case was thus explained to be, that rupture took place into the connective tissue, and the receptacle thus formed contained the urine, but did not allow of its removal with a catheter in the bladder.

When the bladder was examined no sacculation was detected, nor indeed was there enough urine contained in it at the time of rupture to cause the accident through distention, and the inference was that while intoxicated the man had received a direct injury.

Dr. Weir said that, if the diagnosis had been made out, an operation would have been indicated, and might have been performed with benefit. An interesting point brought out by the case was the small amount of disturbance caused by the extravasation of urine, and, when peritonitis did occur, Dr. White was of opinion that it must have been the result of the aspiration, though the uniform safety of aspirating the bladder was against such a view of the case. The autopsy cleared the matter up, however, and showed that the needle did not enter the bladder at all. Some discussion took place between Dr. Weir and Dr. Erskine Mason in regard to the operation indicated in case a correct diagnosis had been established.

Dr. Mason was in favor of making a perineal section similar in all respects to the lateral operation of lithotomy.

Dr. Janeway narrated a case which came under his observation while an *interne* at Bellevue Hospital. A woman was admitted to the wards suffering, as was supposed, from moderate ascites; peritonitis developed on the seventh day, and death took place forty-eight hours afterward. At the autopsy it was found that there was a rupture of the bladder, the fluid escaping into the peritoneal cavity. It was interesting to note that, although the urine had been in the peritoneal cavity, no decomposition had taken place.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 4, 1877.

Dr. S. S. Purple, President.

Thoracentesis in Effusions of the Pleura.—Dr. Beverly Robinson read a lengthy paper on thoracentesis, in which he drew from the literature of the subject the advantages derived from it, and the cases in which it was indicated. He directed attention also to the subject of sudden deaths following this operation. The deductions which he arrived at were as follows: Thoracentesis was imperatively indicated where there was danger to life from pleuritic effusion. It should be performed at an early date, when the effusion was large, for the reason that it may prove fatal, if not by dyspnœa, by syncope, by twisting the aorta and impeding circulation, and by giving rise to œdema of the lungs.

Thoracentesis was also a justifiable operation in moderate effusions, even if they were not purulent, for the reason that a lung compressed by an exudation may become involved in caseous pneumonia, or it may be invaded with miliary tubercle, and, moreover, the effusion may result in adhesions which will bind down the lung and permanently cripple it. The pressure of the fluid on the lymphatics may prevent them from exercising their function of absorption, or absorption may be impossible, from the fact that the pleura costalis and pleura pulmonalis may be so coated with lymph as to shut out the lymphatics completely. In regard to the objection which has been offered that if fluid be removed it will return, Dr. Robinson referred to a French authority, showing that, in twenty-five cases of aspiration performed in simple pleurisy, the fluid returned in only six. Reference was made to the influence, as a diuretic, which aspiration produced, and a case was cited in which two gallons of urine were passed in the twenty-four hours following the operation.

In respect to thoracentesis during the febrile stage of pleurisy, it would seem that it does not, as a rule, increase the temperature, but, on the other hand, does, at times, lessen the intensity of the fever. Several observations have been made in which the operation of thoracentesis has been performed to estimate its effect, and it has been found, both in animals and man, that the puncture of the chest-walls with a sharp instrument is innocuous.

In regard to the danger of converting a sero-fibrinous exudation into a purulent one, Dieulafoy considers it a coincidence, and not the result of aspiration; and, in proof of this, cites several hundred cases in which the operation had been performed.

In regard to the relation of thoracentesis to sudden death, some important facts were adduced: first, that such deaths occurred in pleurisy when no operation had been performed; second, that the operation did occasionally bring about a fatal termination, but that such unfortunate accident might have been avoided if proper safeguards had been taken. The principal cause of death was embolism, caused by the dislodgment of emboli from the pulmonary veins; and, strange to say, this dislodgment took place not during the aspiration, but in washing out the chest with injections. The inference as regards the performance of the operation was to perform it before thrombi had formed, to inject fluid into the pleura with much care and in small amount.

The following *post-mortem* conditions have been found in patients dying suddenly: Vegetations of the valves of the heart, fatty degeneration of the heart, thrombosis of heart, pulmonary, cerebral, and spinal embolisms, acute œdema of the lung, pulmonary congestion, ulcer of the stomach, ulcer of the duodenum, and ulcer of the gastro-epiploic artery. The final deductions by Dr. Robinson were that, inasmuch as the puncture of the walls of the chest by an aspirator-needle was a harmless operation, and any amount of effusion may become dangerous, it is justifiable, in all cases of pleurisy where fluid is present, to aspirate the chest, unless the patient be very feeble, and the effusion be small; in such case it may be wise to defer the operation. Again, if the effusion be extensive, it may be judicious to puncture the chest more than once, and draw off a moderate amount of fluid each time; so that all danger of acute œdema of the lung, of syncope, and of dislodgment of thrombi, be avoided.

Stated Meeting, January 18, 1877.

DR. S. S. PURPLE, President.

DR. PURPLE, on reassuming his duties as President, delivered an address, in which he suggested the building up of a library which would be a credit to the Academy, and an institution of great use to its members. He suggested that a fund should be established for the purchase of books not likely to be received by the library as donations, and strongly urged that Fellows should contribute as many books as possible.

Report on Antiseptic Surgery.—Dr. A. B. Judson read a report from the surgical section on the antiseptic method of performing surgical operations.

Dr. Stephen Smith said that he had practised the method frequently, and was much pleased with the results that he had obtained. He referred to a case in which a rubber drainage-tube disappeared in a sinus, and had not since shown any signs of its whereabouts. He did not regard the carbolic-acid spray as the best antiseptic, and he believed that Mr. Lister was of a similar opinion, and it was to be hoped that a better agent would eventually be brought into use.

Dr. Sayre referred to the case of a child, in which an abscess existed in the inguinal and femoral regions. A quart of pus was removed after incision. The operation was performed after the antiseptic method, and three drainage-tubes inserted. On the third day the discharge was very slight, and at the end of a week the cure was complete.

Dr. Beverly Robinson referred to the French method of surrounding the operated surface with cotton batting, and said that the results were as satisfactory as by the antiseptic method.

Stated Meeting, February 15, 1877.

Dr. S. S. Purple, President.

Identity of Croup and Diphtheria.—A lengthy discussion took place on the above subject, but, unfortunately, there was not enough of clinical or pathological facts to warrant any conclusion. It was suggested as very possible that diphtheria might become engrafted on a case of croupous laryngitis, and thus produce true diphtheritic laryngitis; but, beyond the plausibility of the supposition, no definite proof could be established. Scarlet fever was known to be frequently complicated with diphtheria, or, according to the above hypothesis, the special poison of diphtheria attacked the fauces of those suffering from scarlatina, and, in a short period of time, diphtheria became a complication of the disease.

Dr. JOHN C. PETERS read an account of the ratio of deaths from scarlet fever and diphtheria taken from the Bureau of Vital Statistics, and in this he was supplemented by additional records from Dr. Elisha Harris.

Dr. TAUSKY read an account of investigations pursued in the laboratory of Dr. Heitzmann, and proposed to prove by the microscope the difference between membranous croup and diphtheritic croup.

Dr. BAYLIS suggested that, if there was any difference between croup and diphtheria, it must be proved by evidence other than that furnished by the laryngeal mucous membrane.

Dr. BILLINGTON read a short paper, giving the result of his observations on the disease.

Dr. JOEL FOSTER recited some cases that came under his observation, and described an apparatus for conducting the steam to the bed of the patient, so that the inconvenience of charging the room with vapor might be avoided.

Bibliographical and Literary Notes.

ART. I.—*A Practical Treatise on Diseases of the Skin.* By LOUIS A. DUHRING, M. D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, author of "Atlas of Skin-Diseases," etc., etc. Pp. xv.–618. Philadelphia: J. B. Lippincott & Co., 1877.

THE rate at which the literature of dermatology is increasing in all languages, as well in the form of elaborate treatises as by monographs and society reports, the great care, skill, and expense required in the preparation of atlases and illustrations, clearly indicate the need felt by the profession at large for satisfactory description of, and practical advice concerning, these affections, so annoying to the patient, so often rebellious to the best endeavor of the practitioner.

This book, which has long been looked for, and is now gladly welcomed, and which is the modestly-presented outcome of honest labor, comes from the pen of one who has already acquired the right to respectful attention by previous work in the same field. We need only refer to his "Atlas of Skin-Diseases," notices of which have appeared in our columns.

In the preface the author says it has been his aim to write a concise, practical, and useful treatise, one which, while not claiming to be exhaustive, should afford a clear insight into the elements of dermatology, and a knowledge of all the important facts connected with each disease treated of; and, in the effort to make it simple and intelligible, he has avoided all questions of theory, all discussion of unsettled points, all useless and obsolete terms. The nomenclature is that now in use by the prominent writers and teachers of our own country and Europe; the classification is mainly that of Hebra, and is based entirely upon anatomical and pathological data, in the belief that this method is the most useful and most capable of extended and scientific elaboration.

He mentions, in passing, the fact to which he has called attention elsewhere, that material differences in type mark skin-diseases as seen in different countries, and adds that the types found among us resemble those of Great Britain more than those of France and Germany.

The book opens with lucid short sections on anatomy, symptomatology, and etiology. Under the latter, while the author tacitly disavows the tenets of the school of diathetic skin-diseases, we find the sub-heads of hereditability, predisposition, and constitutional diseases; and, furthermore, the classes of scrofuloderma and syphiloderma are retained, which it is certainly justifiable to characterize as diathetic.

The general considerations of pathology, diagnosis, and treatment, are well handled. Arsenic is strongly recommended in properly-selected cases. Accurate descriptions of the special diseases in detail follow, and are marked by as much positiveness as the nature of the subject allows of; while sufficient regard is shown to the opinions of others, the book furnishes constant evidence of close clinical study, and of the personal familiarity of the author with the diseases he describes. The chapter on syphiloderma is a well-digested exposition of the views now held by the most prominent syphilologists, and has been carefully and studiously prepared. The author advocates Fournier's method of mild, interrupted courses of mercury, but does not offer any argument to justify the arbitrarily established intervals peculiar to this method. The local treatment of all syphilitic lesions is dismissed with the very scant allowance of only half a page. We notice with regret that no allusion is made to the very important and interesting facts concerning the use of mercury, established scientifically, as well as clinically, by a well-known worker in this field. Mercury is so important an agent in the treatment of syphilis, and the distrust of its effect upon the constitution is so wide-spread and so firmly established, that no occasion should be neglected by medical writers to call attention to Dr. Keyes's demonstration not only of the innocuity of small doses of the drug, even when administered for long periods of time, but also of their positive value in improving the general condition of the patient.

The chapter on neuroses is excellent. Only functional maladies (where no objective lesion exists primarily) are considered under this head, and, consequently, certain affections, notoriously of nervous origin, such as zona and urticaria, are not found in this chapter.

The chapter on parasites is equally good. Alopecia areata is excluded from it, and placed among the atrophies, where it undoubtedly belongs, at least until we may be able to put it in a special class of neurotic affections, not purely functional, but marked, also, by objective characteristics.

The modesty of the work, coupled with its real excellence, disarms criticism, and it is not too much to say that, for the general practitioner in the United States, it is the best dermatological text-book extant.

In conclusion, we must refer to the admirable way in which the publisher has done his part. The stout paper and clear, large print are inviting to the reader, while different fonts of type have been skillfully used to mark the arrangement and favor reference.

Art. II.—*Ophthalmic and Otic Memoranda.* By D. B. St. John Roosa, M. D., Professor of Ophthalmology and Otology in the University of the City of New York, etc.; and Edward T. Ely, M. D., Assistant to the Chair of Ophthalmology and Otology, University of the City of New York, etc. New York: William Wood & Co., 1876.

We are not at first sight disposed to regard such very small books as this with much favor, but the authors disclaim in the preface any intention of making the work a text-book in any sense of the word. All that is claimed for it is that it furnishes a concise and correct outline of the subjects treated of, and may serve as a dictionary. Its chief value, in fact, is for those who are attending lectures on ophthalmology and otology, and have not time for systematic reading on those topics. For that purpose the work is admirably adapted. Great care has been taken to insure accuracy, and a really large amount of useful information has been condensed into a very small compass. The treatment recommended is that which the authors have found most efficacious in their extensive clinical experience.

Art. III.—*A Directory for the Dissection of the Human Body.* By John Cleland, M. D., F. R. S., Professor of Anatomy and Physiology in Queen's College, Galway. Philadelphia: Henry C. Lea, 1877.

This work is intended as a guide to the student in the course of dissection. It contains no illustrations, but simply directs the student how to proceed, scalpel in hand, and tells him what he may expect to find at each stage of his work. The plan is an excellent and useful one. This volume does not interfere with the text-books in common use, but merely supplements them, and prepares the dissector for many practical difficulties that are apt to perplex the inexperienced. It is of a convenient size for carrying in the pocket, and should be in the possession of every student of medicine.

Books and Pamphlets Received.—Transactions of the Medical Society of the State of New York for the Year 1876. Pp. 412.

Notes on the Burning of Theatres and Public Halls; Reflections on some of the Causes of the Great Mortality occasionally attending them, with Suggestions as to Improved Security to Life. The Antiquity of the Drama and the Introduction of Theatres into America, with a Chronological List of Theatres and other Public Edifices burned. By J. M. Toner, M. D., Washington, D. C.

Thirty-fourth Report to the Legislature of Massachusetts relating to the Registry and Return of Births, Marriages, and Deaths, in the Commonwealth, for the Year ending December 31, 1875. Prepared under the Direction of the Secretary of the Commonwealth. With Editorial Remarks, by F. W. Draper, M. D., Lecturer on Hygiene in Harvard University. Boston: A. J. Wright, 1877.

The Practitioner's Handbook of Treatment; or, the Principles of Therapeutics. By J. Milner Fothergill, M. D., Member of the Royal College of Physicians, London; Assistant Physician to the City of London Hospital for Diseases of the Chest, etc. Philadelphia: Henry C. Lea, 1877.

Acute Bronchocele with Cardiac Hypertrophy occurring during Pregnancy, and producing Fatal Dyspnœa. By John B. Roberts, M. D., Resident Surgeon, Pennsylvania Hospital. Extracted from the *American Journal of the Medical Sciences*, October, 1876.

A Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. II., No. 12. Peripheral Paralysis. By F. T. Miles, M. D., Professor of Anatomy and Diseases of the Nervous System in the University of Maryland. New York: G. P. Putnam's Sons.

A Case of Fibroid Tumor of the Uterus, causing Eclampsia; with Remarks on Uterine Fibroids in general, etc. By B. B. Brown, M. D., Baltimore, Md. Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children*, January, 1877.

A Text-Book of Physiology. By M. Foster, M. A., M. D., F. R. S., Prælector of Physiology and Fellow of Trinity College, Cambridge. London: Macmillan & Co., 1877.

The Management of the Insane without Mechanical Restraints. Read before the American Social Science Association, Saratoga, September 6, 1876. By J. L. Bodine, of Trenton, N. J.

The Tonic Treatment of Syphilis. By E. L. Keyes, A. M., M. D., Adjunct Professor of Surgery and Professor of Dermatology in the Bellevue Hospital Medical College. New York: D. Appleton & Co., 1877.

Mémoires sur la Galvanocaustique Thermique. Par le Docteur A. Amussat, Fils. Avec 44 Figures intercalées dans le Texte. Paris: Librairie de Germer Baillière, 1876.

Note on the Administration of Phosphorus. By Edward R. Squibb, M. D., of Brooklyn. Republished from the Proceedings of the American Medical Association for 1876.

Seventeenth Annual Report of the Medical Superintendent of the State Asylum for Insane Criminals, Auburn, N. Y., for the Year ending September 30, 1876.

Report on the Influences of Climate in Pulmonary Diseases in Minnesota. By Franklin Staples, M. D. Extracted from the Transactions of the American Medical Association.

Preventing the Extension of Syphilis. By J. R. Black, M. D., Newark, Ohio.

The Function of the Uvula and Prominence formed by the Azygos-Uvulæ Muscles. By T. F. Rumbold, M. D., St. Louis, Mo.

Twenty-first Annual Report of the Trustees of the State Lunatic Hospital at Northampton, Mass.

Fifty-first Annual Report of the Massachusetts Charitable Eye and Ear Infirmary, for the Year 1876.

Fifth Annual Report of the Board of Trustees of the New York Ear Dispensary.

Sixth Annual Announcement of the Medical College of Evansville, Ind.

Sulphate of Cinchonidia: A Substitute for Sulphate of Quinine. Read before the Kentucky State Medical Society, by J. W. Compton, M. D.

Emmons's Annual Medical Directory of Regular Physicians in the State of Illinois.

Braithwaite's Retrospect. Vol. LXXIV., July to December, 1876.

The Kentucky Infirmary; Announcement, Charter, Officers, etc.

Transactions of the Wisconsin State Medical Society, 1876. Pp. 150.

Reports on the Progress of Medicine.

Contributed by Drs. GEORGE R. CUTTER and EDWARD FRANKEL.

SURGERY.

Traumatic Tetanus cured by Chloral and Jaborandi.—Dr. Ferrini reports (*An. Univ. di Med.*) a case of traumatic tetanus thus cured. The case is remarkable from the association of the two remedies. The anæsthetic action of the chloral was useful in retarding the paroxysms and securing restorative sleep to the patient. The jaborandi caused abundant diaphoresis, and thus lowered the temperature, causing a sudden and great improvement in the condition of the patient. The temperature fell in two days from 39° C. to 37°. The treatment lasted twenty days.—*Lo Sperimentale*, October, 1876. G. R. C.

Successful Case of Gastrotomy.—The first successful case of gastrotomy is recorded in the *Gaz. Méd. de Paris*, No. 44, 176, by Verneuil. So far, the operation has been performed fifteen times, and the non-success of the previous operations is ascribable either to the cancerous cachexia of the patients, or to the extreme anæmia and debility when the stricture was non-malignant. Verneuil performed the operation under more favorable conditions. The patient, a lad, seventeen years of age, mason by trade, habits good, had inadvertently swallowed a solution of caustic potassa on February 4, 1876. The acute œsophagitis which resulted gradually disappeared at the end of a fortnight, when he began to experience great difficulty in swallowing. He continued work up to March 31st, when he was obliged to seek relief in La Pitié. There œsophageal catheterization was attempted, but the obstruction at the thoracic portion could not be overcome. He came under Verneuil's care May 24th, in an exceedingly emaciated and feeble condition. A very tight stricture was found about seven centimetres below the superior orifice of the œsophagus, at a point, therefore, where external œsophagotomy is impossible. The patient received nutritive enemata, and Verneuil continued the attempts at passing sounds, but failed; indeed, the stricture seemed to tighten after each attempt. The patient stated that deglutition, impossible during the daytime, seemed easier at night. This was ascribed to spasm, as it is sometimes observed in urethral strictures. The patient was therefore given eight grammes of chloral by enema, which produced complete narcosis, after which the whalebone bougie could without much difficulty be passed into the stomach. The operation, however, was followed by intense pains in the chest, which were relieved by hypodermic injections of morphine. On the following day the patient swallowed beef-tea and meat. The bougie was then passed every two days, and the patient rapidly regained his strength; but the stricture continued to contract, and on July 10th was impassable. The patient relapsed into his former condition, whereupon Verneuil decided to make gastrotomy, which was done July 26th. The operation was performed on the antiseptic plan, a carbolic-acid solution (1 to 20) being used, and the spray. After chloroformigation, an incision was made outward and downward, parallel to the border of the ribs, about two inches in length. A small artery was ligated with catgut. The peritonæum was raised with forceps and divided with scissors. The stomach was seized with forceps, and, while the lips of the wound were held apart, two long acupuncture-needles maintained the wall of the stomach and the lips of the wound in contact. Fourteen metallic button sutures were introduced, after which the acupuncture-needles were withdrawn. The stomach, intensely congested and dry, was next incised sufficiently to allow the introduction of a large rubber catheter, which was fixed in place by silver wire; eight centimetres of the catheter were thus left in the stomach. Considerable hæmorrhage from the gastric wall was checked by artery-forceps left in place. The entire abdomen was then painted with collodion, and the patient put to bed; the operation lasted one hour and a half. One hour later two hundred grammes of milk were injected; the patient made several attempts to vomit, but none of the fluid escaped between the tube and stomach-wall. The dressing consisted of gauze and lint soaked in carbolized water. The artery-forceps were removed late in the afternoon. The patient complained of difficulty of respiration, caused by the collodion. One hundred grammes of milk, with yolk of egg, were injected. Pain in the left hypochondrium was complained of in the night and on the following day, and was relieved by morphine injection. On the 27th, slight jaundice and pain in the right shoulder; every injection of nourishment is followed by slight cough and nausea. On the 28th, marked conjunctival jaundice; urine scanty, assuming a blackish tinge after exposure to air; nutritive injections of seventy to eighty grammes every hour. 30*th.*—Limited redness and slight tenderness around the wound, evidently due to the caustic action of the carbolic acid; no fever at any time. *August 4th.*—Jaundice disappeared; the patient stronger, and the retraction of the stomach less marked; the portion of the stomach strangulated by the sutures was partly necrosed; the wound is much larger than the catheter, and a plate of hard rubber is applied over it, which was later replaced by a catheter of appropriate size. On August 20th the patient left his bed, and continued to nourish himself by injections. While making these he only experiences cold or warmth; after these injections, however, it frequently happens that an abundant secretion of saliva takes place, and he is then obliged either to spit it out or retain a certain quantity of it in the œsophagus. The œsophageal stricture remains impassable. In other respects the patient considers himself well.

E. F.

Cancer of the Lips.—M. Fleury, of Clermont, remarked, at the Association Française, that he had been struck by the frequency of epithelial cancer of the lips in Auvergne, especially in mountaineers; that this lesion was much less frequent in inhabitants of the plains, very rare in city laborers. The cause of this frequency could not be the abuse of tobacco, since the mountaineers, who are most frequently affected, do not smoke; while, on the contrary, those rarely affected, city laborers, all use tobacco. The author, in statistics extending over thirty years, has verified these facts, and arrives at the conclusion that the etiology of cancer of the lips is analogous to that of chimney-sweep cancer. The common cause of epithelial cancer in both seems to be uncleanliness. In colliers M. Manouvriez has attributed the cause to the sweat. Fleury agrees with Bouisson regarding the lesser frequency of epithelial cancer in females, and its localization on the lower lip. He believes that this disease may, by better hygiene and cleanliness, to a great extent diminish, if not entirely disappear.—*Lyon Méd.*, No. 39, 1876. E. F.

PHYSIOLOGY.

Experimental Researches on the Secretion of Milk.—The researches of Dr. Bohrig were made on goats, into whose mammary glands, through the excretory duct, he introduced a tube connected with an aspirator of feeble suction-power and a graduated glass. In this way the milk flowed during the whole experiment, which sometimes lasted three hours. The average quantity discharged during five minutes was about ten drops, but the secretion became more abundant when forcible aspiration was made. The mammary gland of the goat is innervated by two branches of the external spermatic nerve—a median and an inferior branch. The first divides into three other branches, of which one, the papillary nerve, proceeds to the nipple; the other gives off ramifications to the lactiferous canals and to the glandular reservoir—the glandular nerve. Now, when the latter nerve and the median branch are divided, the lacteal secretion is considerably diminished, while electric excitation of the peripheral end of the divided nerve causes the cessation of secretion. Section of the papillary branch, which supplies the nipple, causes relaxation of the latter, while electrization of the central end of this divided papillary branch provokes erection;

excitation of the central end of the papillary branch destroys the lacteal secretion by reflex action. According to the author, the glandular nerve is not a secretory nerve, but a simple motor nerve, which controls the innervation of the contractile elements of the lactiferous canals. Section of the inferior branch of the external spermatic nerve, which branch supplies the vessels of the gland, accelerates considerably the lacteal secretion. On the other hand, it is arrested when the peripheral end of this nerve is excited. There are modifications in this nerve which give rise to considerable variations in the quantity of milk secreted. The varieties of intravascular pressure induce quantitative modifications. Thus, substances which, like strychnine, caffeine, and digitaline, augment the intra-arterial pressure, likewise constantly have the effect of stimulating the secretion of the mammary gland when the glandular nerves have previously been divided. Especially with strychnine, the quantity secreted is fifteen times as much. The discharge of milk is even more markedly augmented when jaborandi is administered. The researches of the author induce him to conclude that the administration of jaborandi causes a transient diminution, followed very soon by an augmentation of intra-vascular pressure. Conversely, the substances which possess the property of lowering the blood-pressure also have the effect of diminishing the secretion of milk; such is chloral, which almost entirely checks the secretion for a whole day. It is noteworthy that chloral at first, and for about six or seven minutes, exaggerates the secretion.

For the purpose of more precisely studying the influence of blood-pressure on the mammary secretion, the author has instituted experiments with the kymographion. Augmentation of the intra-arterial pressure was obtained by suspending the respiration of the animal, or by exciting the central end of the pneumogastric nerve; in order to obtain a diminution of intra-vascular pressure, the author resorted to apnœa, or excitation of the peripheral end of the pneumogastric. Now, the quantitative modifications were found parallel to the height which the blood-pressure had attained. These data will certainly in future find practical application. Lastly, the author has again established the immunity which the goat enjoys in regard to certain poisons. Thus, by injecting curare into the jugular vein of the animal, complete abolition of all voluntary motion was obtained with a dose of one hundred and thirty to one hundred and fifty milligrammes. One gramme of morphine introduced in the same way did not cause narcosis.—*Virchow's Archiv; Gaz. Méd.*, No. 45, 1876.

E. F.

DISEASES OF WOMEN.

On the Nature and Treatment of Cracked Nipples.—According to Dr. Le Diberder, fissures of the nipple are not really the entire ailment, but a manifestation of derangements of the puerperal state. If, as Dr. Donné asserts, the fissures are due to the constitution of the milk, the alteration of the latter would imply a pathological condition of the blood. Indeed, as soon as the fissures appear, the pulse accelerates, the skin becomes hot, there are much thirst, general lassitude, and, lastly, perspiration. Sleep and appetite participate in the general disorder. Under the influence of the fever, the fissures become more tender, and augment in surface and depth; nursing becomes impossible. The author considers the febrile exacerbations as the cause, not the consequence, of the fissures; he has been led to place a secondary value on local treatment, for which he substitutes general treatment with sulphate of quinine. The latter is given in doses of fifty to eighty centigrammes a day; the local treatment consists in protecting the parts with Samaritan balm or fresh, unsalted butter. In all cases the improvement is rapid, and a cure is accomplished at the end of five or six days. In support of his theory, the author refers to numerous observations and a practice of thirty years, and invites a trial of his method. —*Annal. de Gynécol.* and *Lyon Méd.* E. F.

THEORY AND PRACTICE.

On the Presence of Iron in Grain.—Whatever the mechanism by which ferruginous preparations act in chlorosis, it is established that it is not necessary to administer iron in large quantities in order to produce its effect sooner or later. It is known that never more than twenty-five or thirty centigrammes of iron are absorbed. Iron is one of the constituent elements of plants; it appears indispensable in the formation of the green coloring-matter of chlorophyll; but this body is found in extremely minute amount. Grain contains iron in considerable proportion, but different investigations have resulted in contradictory results. Thus, according to the analyses of Boussingault and Fresenius, grain contains scarcely any iron. On the other hand, the recent researches of M. de Gasparin have established that the sesquioxide of iron constitutes one-fifth in weight of grain-ashes. It is necessary to observe that the variety of grain experimented with was different. The former investigators examined Alsatian grain, while Gasparin that of Provence. The presence of a notable quantity of iron in certain grain, and the variations which this quantity undergoes according to production, may be of some importance in the alimentation of chlorotic patients. The use of bread made from grain known to be rich in iron may be of use in the treatment of this malady.—*Lyon Méd.*, 45, 1876. E. F.

Miscellany.

The Woman's Hospital.—The twenty-third annual report of the Woman's Hospital in the State of New York shows that institution to be free from debt and in a prosperous condition. The Baldwin Pavilion has been completed, but is not yet opened. By the occupation of the new pavilion, the hospital will be enabled to offer increased accommodations to the wealthier class of patients. During the past year 289 patients have been admitted to the hospital; 162 operations have been performed; 15 deaths have occurred; and 237 patients have been discharged, leaving 51 still in the ward on the 1st of last October. In the out-door service 3,500 consultations have been held by the corps of assistant surgeons, and skilled treatment furnished to a very large circle of poor patients. The report of the Treasurer of the Board of Governors shows the expenses of the hospital during the year ending November last to have been $118,744.05, and the receipts during the same period, from donations, interest on investments, and other sources, $127,901.20, leaving a balance of $9,157.15. The report of the Treasurer of the Board of Supervisors for the eleven months ending October last gives the expenditures for salaries, provisions, repairs, etc., as $24,440.80, and the receipts during the same period as $24,506.76, leaving, with the balance of $603.55 of the previous eleven months, a balance on hand of $669.51. During the year the donations of private individuals amounted to $67,357.33, the subscriptions of the "Woman's Century" (a society of ladies organized for the purpose of preventing an accumulation of debt on the hospital) amounting to $1,855.

Journalistic Notes.—The *Journal of Physiology and Anatomy*, begun by Meckel, but better known under the authorship of Du Bois-Reymond and Reichert, of Berlin, has been divided into two parts, of which one will be continued as a journal of physiology under Du Bois-Reymond and Ludwig, of Leipsic, the other as a journal of anatomy under Braune and His. The *Revue de Litérature Médicale* is the latest addition to the medical journals published in Paris. The greater part of the first number is devoted to original articles. One of the features of the journal is a series of short notices accompanied by photographs of celebrated medical men of the past. The *American Veterinary Review* is the title of a new journal, devoted to the interests of veterinary medicine and surgery, and published under the auspices of the United States Veterinary Medical Association. A. Liautard, M. D., V. S., is editor, and A. Lockhart, M. R. C. V. S. L., is assistant editor. In Germany a fine edition of Galen's works is being brought out under the editorship of Prof. Ivan Müller, of Erlangen, who adds a Latin version and critical notes. Another German work of much interest is the "History of Medicine," of Dr. Hermann Baas, "Gundriss der Geschichte der Medicin und des heilenden Standes." Besides being a history of medicine, it is full of curious information respecting the social position of the doctor, his practice, fees, etc., in different ages, from the earliest times down to our own day.

Appointments, Honors, etc.—Dr. W. T. Bull has been appointed Attending Surgeon to the House of Relief, of the New York Hospital, Chambers Street. Dr. George M. Lefferts has been appointed Laryngoscopic Surgeon to St. Luke's Hospital. Medical Director William Grier has been appointed Chief of the Bureau of Surgery in the Navy Department.

Charles West, M. D., has been elected President of the Obstetrical Society of London. Charles Murchison, M. D., LL. D., F. R. S., has been elected President of the London Pathological Society. Dr. von Hebra, the illustrious Professor of Dermatology in the University of Vienna, has just received, in acknowledgment of his scientific and professorial services, the Order of the Iron Crown of the third class. The memorial day of the late Prof. Traube, of Berlin, was on Sunday, December 10th, when his successor, Prof. Leyden, read an obituary address at twelve o'clock in the hall of the university. His library has become the property of the Berlin publisher, Herr Hirschwald, and will be disposed of in separate volumes. Dr. Geo. W. Callender, F. R. S., has been elected President of the Clinical Society of London for the ensuing year. Dr. A. Röhrig, of Kreuznach, has been called to be Professor of Medicine in the University of Freiburg.

Medical Society of the State of New York.—The Transactions for 1876 are now ready for distribution. Permanent members, after paying their annual dues of two dollars to the Treasurer, Dr. Charles H. Porter, of Albany, will receive a copy free of other expense.

The following resolutions were passed at the last meeting of this Society :

1. Each permanent member shall pay to the Treasurer of this Society an annual assessment of $2.00.

2. Each permanent member, who shall have paid his annual dues, shall have a copy of the Transactions for the year

for which he shall have paid sent to him by the Committee of Publication.

The price of the Transactions for 1876 will be $1.50, with 15 cents additional for transportation.

Instruction in Microscopy.—The value of the microscope in medicine is so great that a practical acquaintance with its use, for purposes of diagnosis, is an indispensable part of every complete medical education. Dr. Heintzman, of this city, is now organizing, at his laboratory, 37 West Forty-fifth Street, special classes for the benefit of advanced students and recent graduates. Dr. Heintzman is provided with the best and latest apparatus, and an abundance of material for demonstration. He has had many years' experience as a teacher in this department, and that he has devoted much attention to original research is shown by a paper read by him before the County Medical Society, January 22d, on the "Cell-Doctrine," which will appear in full, with illustrations, in our next issue.

Pictures for Hospital-Walls.—A successful effort has been made in London to obtain contributions of engravings, sketches, or other forms of pictorial adornment, for the walls of the various hospitals. The example deserves imitation. Preference should be given to colored pictures for this purpose. Nothing can be more dreary to the eye than the wide expanse of blank wall as it exists in many of our hospitals. An appeal to the public for such contributions as could be spared from time to time would probably meet with a generous response.

Baltimore Medical and Surgical Society.—The following officers have been elected for the ensuing year: Dr. W. W. Murray, President; Drs. R. W. Mansfield and S. W. Seldner, Vice-Presidents; Drs. W. Brinton and C. C. McDowell, Secretaries; Dr. D. W. Cathell, Treasurer; Committee of Honor, Drs. J. S. Lynch, A. B. Arnold, and L. B. Winternitz; Committee on Lectures and Diseases, Drs. T. B. Evans, J. J. Caldwell, and W. J. McDowell; Executive Committee, Drs. J. Morris, J. Rehberger, and A. F. Erich.

Cleopatra's Needle.—This celebrated obelisk, which was many years ago presented to the English nation, is about to be removed from the sands of Egypt and erected on the Thames Embankment. The expense of transportation will be borne, it is stated, by "a distinguished and public-spirited surgeon," who does not wish his name made public till the work is accomplished. It is stated also that Mr. Erasmus Wilson is the public-spirited surgeon aforesaid.

The American Microscopical Society.—At the annual meeting, held January 9, 1877, the following officers were elected for the ensuing year: John B. Rich, M. D., President; Wm. H. Atkinson, M. D., Vice-President; O. G. Mason, Secretary; T. d'Orémieulx, Treasurer; John Frey, Curator.

O. G. Mason, *Secretary.*

Ether-Drinking in England.—We learn from the *Lancet* that a large amount of ether-drinking goes on in certain parts of the north of England, and that, as ether intoxicates more cheaply than alcoholic beverages, the consumption of the former is continually increasing.

The New York Pathological Society.—The following officers have been elected for the ensuing year: Dr. E. G. Janeway, President; Dr. E. L. Keyes, Vice-President; Dr. George F. Shrady, Secretary; and Dr. John H. Hinton, Treasurer.

New Medical Colleges.—It is announced that a new medical college is to be established in Nashville, Tennessee, and another in New Albany, Indiana.

Albany Medical College.—At the commencement exercises of this college, held January 31st, the degree of doctor of medicine was conferred on thirty-eight gentlemen.

The Late Dr. George Wilkes.—At a meeting of the New

York Medical and Surgical Society, held December 30, 1876, the following resolutions were adopted:

Resolved, That the members of this Society have heard with deep regret the intelligence of the death of their late associate, George Wilkes, M. D.

Resolved, That we cherish his memory, as that of a true friend, an upright and honorable member of our profession, a good citizen, and an honest man.

Resolved, That we recommend as worthy of praise and of imitation his benevolence and disinterested kindness to the poor.

Resolved, That we sympathize with his family in the bereavement which they have sustained.

Resolved, That a copy of these resolutions be sent to the medical journals, and to the family of the deceased.

James R. Wood, *President.*

R. F. Weir, *Secretary.*

New Anæsthetic Agent.—Rabuteau, in a memoir read before the Académie des Sciences, states that he has investigated the physiological properties and mode of elimination of hydrobromic ether. He has satisfied himself that this anæsthetic agent, which possesses properties intermediate to those of chloroform, bromoform, and ether, might be advantageously employed to produce surgical anæsthesia. The hydrobromic ether is neither a caustic nor an irritant. It can be ingested without difficulty, and applied without danger not only to the skin, but to the external auditory meatus and to the mucous membrane. It is eliminated completely, or almost completely, by the respiratory passages, in whatever way it may have been introduced into the system.—*Lancet.*

Army Intelligence.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 14 *to February* 13, 1877.

Magruder, D. L., Surgeon.—Granted leave of absence foi two months. S. O. 21, A. G. O., January 29, 1877.

Randolph, J. F., Surgeon.—Assigned to duty in the Military Division of the Atlantic. S. O. 29, A. G. O., February 8, 1877.

McKee, J. C., Surgeon.—Assigned to duty as Medical Director of the Department, relieving Surgeon Magruder. G. O. 1, Department of Arizona, January 1, 1877.

Bill, J. H., Surgeon.—Assigned to temporary duty at McPherson Barracks, Atlanta, Ga. S. O. 23, Department of the South, January 30, 1877.

Wright, J. P., Surgeon.—Assigned to duty at United States Military Prison, Fort Leavenworth, Kan. S. O. 18, Department of the Missouri, January 29, 1877.

Fryer, B. E., Surgeon.—Assigned to duty as Post-Surgeon at Fort Leavenworth, Kan. S. O. 18, C. S., Department of the Missouri.

Greenleaf, C. R., Surgeon.—Relieved from duty in Department of the South, and assigned to duty in Department of the Gulf. S. O. 28, A. G. O., February 7, 1877.

Waters, W. E., Assistant Surgeon.—Assigned to temporary duty at Fort Columbus, N. Y. H. S. O. 29, C. S., A. G. O.

Gibson, J. R., Assistant Surgeon.—Assigned to duty at Fort McPherson, Neb. S. O. 5, Department of the Platte, January 12, 1877.

Gardner, W. H., Assistant Surgeon.—Assigned to duty in Department of the South. S. O. 29, C. S., A. G. O.

Whitehead, W. E., Assistant Surgeon.—Assigned to duty at Fort Riley, Kan. S. O. 18, C. S., Department of the Missouri.

Buchanan, W. F., Assistant Surgeon.—Assigned to duty in Department of the South. S. O. 29, C. S., A. G. O.

Bentley, E., Assistant Surgeon.—Assigned to duty in Department of the Gulf. S. O. 29, C. S., A. G. O.

Vickery, R. S., Assistant Surgeon.—Relieved from duty in Department of the Gulf, and assigned to duty in Military Division of the Atlantic. S. O. 29, C. S., A. G. O.

Wilson, W. J., Assistant Surgeon.—Assigned to duty at Fort Craig, N. M. S. O. 22, Department of the Missouri, February 3, 1877.

Moffatt, P., Assistant Surgeon.—Granted leave of absence for two months. S. O. 24, A. G. O., February 1, 1877.

Ainsworth, F. C., Assistant Surgeon.—Assigned to duty as Post-Surgeon at Camp Grant, A. T. S. O. 1, Department of Arizona, January 2, 1877.

Skinner, J. O., Assistant Surgeon.—Granted leave of absence for one month. S. O. 28, Department of the South, February 6, 1877.

Wilcox, T. E., Assistant Surgeon.—Assigned to duty at Camp Supply, Indian T. S. O. 18, C. S., Department of Missouri.

Price, C. E., Assistant Surgeon.—Assigned to duty at Alcatraz Island, Cal. S. O. 8, Military Division of the Pacific and Department of California, January 17, 1877.

Wood, M. W., Assistant Surgeon.—Assigned to duty at Camp Robinson, Neb. S. O. 5, C. S., Department of the Platte.

Rosson, R. L., Assistant Surgeon.—Assigned to duty at Camp Thomas, A. T. S. O. 1, C. S., Department of Arizona.

Buell, J. W., Assistant Surgeon.—Assigned to duty at Fort Concho, Tex. S. O. 23, Department of Texas, February 5, 1877.

Andrews, W. C. C., Assistant Surgeon.—Assigned to duty in Department of the Columbia. S. O. 21, C. S., A. G. O.

Robinson, Samuel Q., Assistant Surgeon.—Assigned to temporary duty at the United States Military Academy, West Point. S. O. 21, C. S., A. G. O.

Davis, Wm. B., Assistant Surgeon.—Assigned to temporary duty at St. Louis Depot, Mo. S. O. 21, C. S., A. G. O.

Promotions and Appointments.

McCormick, C., Assistant Medical Purveyor.—Promoted Surgeon, with rank of colonel, *vice* J. J. B. Wright, retired.

Swift, E., Surgeon and Major.—Promoted Assistant Medical Purveyor, with rank of lieutenant-colonel, *vice* McCormick, promoted.

Notson, Wm. M., Assistant Surgeon.—Promoted Surgeon with rank of major, *vice* Swift, promoted.

Samuel Q. Robinson, M. D., and Wm. B. Davis, M. D. (Approved candidates).—Appointed Assistant Surgeons United States Army, to date from January 9, 1877.

Obituary.

Mr. Alfred Smee, F. R. S., died January 11, 1877, at his residence in London, aged fifty-eight, of diabetes. He was for many years surgeon to the Bank of England. He had from an early age given much attention to the subject of metallurgy and electricity; as regards the former he published a good work, which was, however, superseded by more modern treatises, while his name was best known in connection with the latter by the improved form of voltaic battery called "Smee's battery." He became a member of the Royal College of Surgeons in 1840, and was elected F. R. S. early in life. Mr. Smee was a very energetic, active-brained man, and he wrote much on many subjects—for example, on the potato-disease, biology, and electro-biology, "The Principles of the Human Mind," and "My Garden."

Dr. George Thompson, of this city, met with accidental death from poisoning on Monday, January 15, 1877. He was a graduate of the University of Vermont, 1864, was a member of the Medical Society of the County of New York, and Surgeon to the Ninth Regiment, N. G. S. N. Y.

Sir William Fergusson, President of the Royal College of Surgeons, and Sergeant-Surgeon to the Queen, died February 11th, aged sixty-nine. He was born in Scotland, in 1808, and received his medical education in Edinburgh. In 1828 he became licentiate of the Royal College of Surgeons of Edinburgh, and in 1831 he began to lecture on surgery. In 1840, receiving the offer of the chair of Surgery in King's College, London, he moved to that city, and soon attained a great professional success. He was created a baronet in 1865, and in 1870 was elected President of the Royal College of Surgeons. His contributions to medical literature are well known to the profession, and his fame as a surgeon is world-wide.

Von Baer.—The death of this celebrated investigator and embryologist occurred November 28, 1876. He was eighty-five years of age.

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Original Communications.

Art. I.—*The Cell-Doctrine in the Light of Recent Investigations.*[1] By C. Heitzmann, M. D., New York.

The subject of my discourse is living or organized matter, that substance which builds up plants as well as animals, the simplest infusorium as well as the most highly developed mammal. The facts which I am about to explain are destined to throw light on many physiological and morbid processes, to assist the physician in the diagnosis and prognosis of different diseases, and perhaps even to direct his therapeutical action.

The question, what living matter really is, cannot yet be nswered from a chemical standpoint, and there is reason to loubt whether it ever will be settled, inasmuch as it is imossible to obtain pure living matter in a quantity sufficient or chemical analysis. In every substance the living matter nust necessarily be composed of minute particles, which an never be seen, even with the highest magnifying powers, . e., the simplest units, the so-called molecules, which admit f no further division. After Elsberg's at present almost uniersally-adopted denomination, we shall term the molecules of the living matter "plastidules." Molecules, again, are composed of simple elementary atoms, the quantity and nature of which give the essential character to every substance. While the molecules of inorganic bodies are formed by relatively few atoms—water-molecules, for instance, being built up of one atom of oxygen and one atom of hydrogen—we know that the plastidules are much more complicated in their atomistic construction. Every plastidule is formed by at least five elements, namely: 52 to 55 per cent. carbon, 21 to 23 per cent. oxygen, 15 to 17 per cent. nitrogen, 6 to 7 per cent. hydrogen, and 1 to 2 per cent. sulphur. The nature of the union of these elements is a very complicated one in every plastidule, but not as yet elucidated. We generally call the organic substances simply proteinates or albuminates, comprehending by these terms both the living matter and its derivations or products.

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[1] Read before the County Medical Society of New York, January 22, 877.

While chemical examination has revealed very little of the intimate nature of living matter, we know certain properties to be essential to living matter as long as it is really alive, and we know also some of its morphological features.

These properties are mainly two: motion, and the capability of producing its own kind. In speaking of the motion of living matter, we do not mean the motions to which every substance is subject, and of which light, heat, electricity, etc., are peculiar manifestations; but there are certain forms of motion dependent on the contractility or irritability of living matter which do not occur in inorganic bodies, nor in organic matter after it has ceased to be alive. The motion is of two varieties: one leading to changes of shape, the other to changes of place—locomotion. Both kinds are due to a peculiar structure of the living matter in a certain stage of its development, and will occupy us afterward. Here I will only mention that, in former times, locomotion was considered as a characteristic quality of animals. To-day we are fully aware that a great many of the low forms of vegetable life in different stages of development are endowed with locomotion, apparently depending on a certain degree of individual will.

The property of producing its own kind is exclusively possessed by living matter, and is also of two varieties, viz.: production for the benefit of the individual itself, with the result of increase of size—growth; and production of new individuals—generation. We know that every living body is originally very small; the ovum of the largest animal is just perceptible to the naked eye, but it increases by taking up nourishing material from without—it grows. After having reached a certain size it does not grow larger, but only reproduces the used-up material, until at last it ceases to produce anything, and then becomes what we term dead, and thereupon is subject to chemical laws of decomposition, which means simplification of its atomic construction. To-day, scientists have arrived at the conviction that the building-material of plants cannot be essentially different from that of animals. With advancing knowledge of natural philosophy, the boundaries between the animal and vegetable kingdoms have more and more faded away. It is impossible, in many cases, to say exactly at which point of development an organism is certainly a plant or an animal. Huxley is of the opinion that the only distinguishing character between plants and animals is that the former feed on simple or elementary inorganic material, while the latter take in organized food; but this opinion can hardly be maintained, inasmuch as it is impossible to say how the lowest forms of animals are nourished at all. We know, moreover, through Charles Darwin's researches, that there are carnivorous plants.

The property of generation may be looked upon, in accordance with E. Haeckel's definition, as a growth of the individual beyond its individual limits; at least, every organism must reach a certain degree of development before it is fit for propagation. This property is so characteristic for living matter that Lady Montagu, having been taught by a philosopher that every organism is a mechanical apparatus, raised the question whether he ever saw, when putting two watches together, a third one resulting from it. It is known that among the lowest forms of organisms propagation takes place without sexual intercourse, whereas there is a division of labor among the higher organisms, both vegetable and animal: in the former case, one individual gives rise to a new one; in the latter, two individuals (male and female) are required to produce a third. It is known, furthermore, that the simplest form of propagation is division, when one individual, after having increased in size, splits into two organisms of smaller size. A variety of this process is the "gemmation," e. g., a small bud, growing from the surface of the mother-body, becomes gradually pedunculated, and at length separates by breaking of the pedicle, and forms a new individual. Another variety is the "endogenous formation," in which a lump originates and grows within the mother-body, and is freed afterward through bursting or active perforation of the mother. Essentially all these processes are the same, and the main form of propagation is always a division. Even in the most highly-developed mammals the embryo originally forms a part of the mother-body, and, after having grown, by internal gemmation or endogenous production, up to a certain size, separates from the vehicle, the womb, and represents a new individual.

There are certain peculiarities about generation which I beg leave briefly to explain. I mean the resemblance of the newly-formed body to the producing organisms, the parents. It is an easy matter to understand that both individuals will be alike in a case of simple division, because both formerly made one single body; but how shall we explain the remarkable fact that, in higher animals, the offspring so closely resembles the progenitors, though only very minute parts of these—the ovum and the spermatozoids—contributed to give rise to a new individual?

The opinion of E. Hering, of Prague, that organized matter is endowed universally with an "unconscious memory," a function upon which depends, besides the capacity of imagination, of thinking, of habit, also nutrition and propagation, is not an available one. I therefore take into consideration only the three modern hypotheses, of Charles Darwin, Louis Elsberg, and Ernst Haeckel. Charles Darwin promulgated in 1868 the "Provisional Hypothesis of Pangenesis," which consists essentially in the assumption that through all stages of development the living cells or units of the body throw off small granules, or "gemmules," which accumulate to form the sexual elements, and all the cells of the body, therefore, participate indirectly in the new formation of organisms. In 1872 Elsberg published his theory of the "Regeneration or Preservation of the Plastidules." He lays down the proposition that the germ of every living individual contains plastidules of all its ancestors; so that these are bodily regenerated in their offspring, simply because bodily particles are preserved directly from generation to generation. In 1875 Haeckel announced the hypothesis of the "Perigenesis of the Plastidules," according to which, in opposition to the opinions of Darwin and Elsberg, no regeneration or preservation and transmission of plastidules take place, but only a transmission of motion through inheritance.

Among these theories I confess that that of Elsberg seems to me the most probable one, inasmuch as it tries to explain why certain properties of ancestors, even in the second or third generation, may reappear; why bodily and mental peculiarities are directly transmitted from parents and grandparents to their offspring. With this theory, which suggests a direct increase of plastidules within a limited bulk of living matter, we may readily understand why, with progressive development of a species, a perfection takes place which leads to the production of more and more advanced beings from relatively lower ancestors. Haeckel's view can scarcely be supported so long as we know that a change of motion as function is always due to a material cause, namely, change of molecules in quality and quantity. All this is speculation only, though entirely legitimate as an attempt to bridge over precipices which present insurmountable obstacles to the passage of our intellect.

Let us advance now toward the study of the shape of living matter, a study in which excellent investigators have been engaged during the last forty years.

In 1835 Dujardin discovered a contractile substance common to low animals, which he termed "sarcode," but he was far from the knowledge that this substance exists in all animals, believing it to be peculiar to the lowest forms. After Schleiden, of Jena, in 1838 discovered the form-elements of plants, and proposed for them the name of "cells," Theodor

Schwann, of Berlin, in 1839 found a striking analogy between the intimate structure of vegetable and animal organisms, and asserted that the "cells" are the simplest constituent parts of all tissues of the animal body as well as of the plant. In his opinion each cell is a vesicle composed of a transparent membrane, containing a fluid in which is suspended a central solid body, the nucleus. Schwann believed that cells may originate in a substance, the plasma, independently of former cells, and through the authority of Johannes Müller, of Berlin, who fully accepted Schwann's doctrine, this became the leading one, so that even C. Rokitansky, of Vienna, held at first that the plasma of the blood may, under favorable circumstances, produce cells. It was the discovery of Rudolph Virchow, in 1852, that the cells are really the seats of life, and that every cell must originate from a former cell: *Omnis cellula e cellula.* Virchow, however, still adheres to Schwann's original idea as to the construction of cells, although a very simple consideration will show that this cannot be correct, viz., the consideration of the fact that no living material is ever a fluid, but always either a solid or a jelly-like, semifluid substance. The next who advanced the cell-doctrine was Max Schultze, of Bonn. He showed in 1861 that changes of form, locomotion, and division, are impossible to corpuscles surrounded by a resistant membrane; he maintained that the smallest individual elements of organisms are lumps of a jelly-like matter endowed with life, for which he proposed, for good reasons, in accordance with the German botanist Hugo von Mohl, the term "protoplasm." This jelly-like substance is identical with Dujardin's "sarcode." Max Schultze was the first to announce that the living matter of the infusion-animalcules and that of the cells of all animals are one and the same substance. The cell consists, according to this observer's views, of a minute particle of protoplasm, in which there are imbedded the nucleus and granules. In the same year (1861) E. Brücke, of Vienna, though accepting Max Schultze's views asserted that the nucleus is not an essential part of the cell, as he knew of many living lumps without any nucleus. Brücke defined the "cell," for which he also proposed the name of "elementary organism," to be a structureless lump of protoplasm; though fully aware of the necessity of the existence of some structure, as in every substance, he regarded the structure of the cell as imperceptible to our senses. S. Stricker, in accordance with Brücke, in 1868 explained that the cell is nothing but a particle of structureless protoplasm, usually containing granules, but that these granules are not essential characteristics. He especially examined the form-elements of the ovula of frogs while studying their development, and observed in these elements hyaline flaps, which he took for pure protoplasm, whereas the greater part of the protoplasm was filled with granules or particles of yolk. The fact that every living lump is capable of taking in foreign minute corpuscles, granules of carmine or aniline for instance, from without, led him to the conclusion that protoplasm is devoid of any visible structure, while the visible granules are secondary products of the protoplasm or foreign substances accidentally taken into the interior of the protoplasmic lump. S. Stricker in his "Histology" discusses the question, "how large the lump of protoplasm must be to be entitled to the name of 'cell,'" and comes to the conclusion that we should call a living corpuscle a "cell" only when we perceive in it the properties of a living organism, viz., growth, motion, and reproduction. In 1862 Lionel Beale, of London, accepted Max Schultze's doctrine and the term "protoplasm," arriving, however, at conclusions quite different from those of German biologists. Apparently his microscopes, although magnifying very much, did not show him the details within the protoplasm, and thus, judging especially from carmine staining, he asserted the nucleus to be living or "germinal" matter, while a great deal of protoplasm was to him identical with the basis substance of connective tissue, and he termed this the "formed material," designating by this term even the most active tissues, the muscles, and nerves.

This was the state of the cell-doctrine when I took up its study in Vienna in 1872. After having observed certain peculiarities in various protoplasmic bodies, I endeavored to investigate the condition of living matter in so-called infusions, and I may say that in this I was successful.

If we place some black earth and green blades of grass, in some Croton water, in a soup-plate, and allow this infusion to stand undisturbed in a light room at ordinary temperature, we shall always succeed in raising new organisms, so-called infusoria. There are different ways of making an infusion: for instance, we may simply infuse some hay or chicken's food in water; but I prefer the method mentioned, on account of the certainty of its producing important low forms of animalcules.

Strange to say, but it is a fact, that if we mix together some inorganic material, earth and water, with organized bodies, such as grass, apparently destined to decay, there will sprout up a remarkably rich generation both of plants and animals. To explain this fact is quite difficult. Some observers believe that the decaying particles of vegetables themselves change into new organisms under favorable circumstances; while others, and doubtless the majority, are of the opinion that there are floating in the air millions of invisible germs of plants and animals, which, on finding a favorable soil for development, begin to grow and prosper. The germ-theory, first thoroughly established by Pasteur, has not as yet been contradicted in a satisfactory manner; we have, therefore, every reason still to adhere to it. Certainly no development of infusoria takes place if the air be prevented from reaching the infusion.

It is very remarkable that I succeeded in raising almost identical forms of living organisms on mixing together the same material several thousand miles away from New York, viz., in Vienna. There is a slight difference, however, important enough to be mentioned. In Vienna I never saw an amœba without a distinct lump in its interior, the nucleus; while in New York the more common occurrences are amœbæ without nuclei. As these animalcules are identical in every other respect both in Vienna and New York, this fact disproves the opinion of many histologists that the nucleus is something essential to the so-called "unicellular" organism. Haeckel's view, viz., that there is a marked difference between forms devoid of a nucleus, termed by him "cytodes," and those with nuclei, termed "cells," must be considered to be untenable.

Let us take from the infusion, best from the sides of the plate, a drop; place it on a slide, cover it with a thin covering-glass, and examine it carefully with a high magnifying power, of about one thousand, with a good immersion-lens. On the first or second day after making the infusion we do not succeed in discovering any organism in it, unless such were already present on the torn grass. About the third day we see a number of very minute granules, just perceptible to the highest powers of the microscope; these granules are yellowish, shining, and motionless. One day afterward, besides such small granules there are seen very many somewhat larger ones, which in their interior show a central hole, inclosed on all sides by a yellowish, shining substance. That this is the case can be proved by adding a drop of water, whereupon the granules turn and always present the same aspect. The cavities in the interior of the shining lumps, apparently filled with some fluid, differ in their refracting power from the surrounding mass; they show a slight rosy color and bear the name of "vacuoles" in histology. A vacuole is the first sign of a differentiation within the lump, though the latter is still immovable.

One day later we see, besides the forms already described, somewhat larger, round granules with several vacuoles, some granules looking as if perforated by vacuoles, like a sieve; the differentiation between the two substances within the lump—the yellowish, shining, and the colorless, rosy refracting one—has apparently advanced. On the fourth or fifth day we have before us a certain number of small living plants and animalcules. Among these let us choose a lump, which, looked at with a magnifying power of about five hundred, has already shown us wonderful changes of shape after a few minutes' rest, due perhaps to the shock of the transport from the plate to the slide. Such a minute transparent corpuscle, floating in the water of the infusion, constantly changes its outlines, by throwing out offshoots or processes, mostly in the form of hyaline flaps. We are sure we have an amœba before us.

The best species for our examination is the common *Amœba diffluens*, which slowly moves in one direction by protrusion of single flaps; the star-like and giant amœbæ are less fit for close examination, both on account of their rapid and complicated changes and their limited viability. With a magnifying power of five hundred we recognize in the nucleated amœba a shining lump, viz., the nucleus; around this a small, light seam, not uniform during the motion of the lump; and minute grayish or yellowish granules, scattered throughout the transparent mass. The floating amœba throws out offshoots in all directions, and retracts them again; it therefore changes its shape, but does not move away. Presently we observe, by careful handling of the screw of the microscope, that one of the processes reaches the surface of the covering-glass or of the slide, and at the next moment the floating ceases and creeping begins. The amœba protrudes, on one side of its body, a hyaline flap, while on the opposite side an apparent accumulation of the granules takes place; shortly afterward the granules are again uniformly distributed, and the whole lump is dragged toward the point of the protruded hyaline flap.

Let us now adjust the immersion-lens. We recognize in the centre of the body the apparently solid or vacuolized, roundish nucleus, and this surrounded by a narrow, transparent seam. The latter is traversed by very delicate, slender, conical, grayish threads, of which the thicker ends emanate from the nucleus, and the points are attached to the nearest granules, scattered in the body of the amœba. Many of these granules are connected with each other by slender threads, and are thus in direct communication with the denser stratum circumscribing the amœba. In this way a delicate network is formed, with nodules, represented by the nucleus and the granules. Whenever a hyaline flap is being protruded, there appears on the opposite side of the body an approximation of the granules to each other, and a perceptible enlargement of the same; in the protruded flap itself the granules, on the contrary, become smaller and separate from each other until all structure disappears from our view, and the flap represents a homogeneous mass. After having reached a certain size, the flap again presents the above-mentioned structure, and the granules float toward the protruded point, and drag with them the nucleus, which itself never shows active change of shape or motion. The locomotion of the amœba is thus accomplished.

At the next moment the same spectacle is seen again and again, perhaps for an hour, until the movements become slower, and at last we have before us an immovable round body, when the amœba is dead.

During the movements of the amœba vacuoles not unfrequently make their appearance within the body. Every vacuole appears to be lined by a thin, shining, continuous layer, analogous to the layer which surrounds the whole body. Sometimes floating granules can be observed within the vacuole, which by turning around change their places and now and then throw out delicate threads; occasionally some of these threads reach the wall of the vacuole, then the latter suddenly disappears and the network is reëstablished. Such changes in vacuoles are frequently observed in the body of another infusion-animalcule, the shooting cyclidium, and also of human colorless blood-corpuscles.

By adding a drop of distilled water to the preparation we succeed in making the amœba swell up, whereupon most of the granules, apparently torn apart, jump about very actively in the interior of the body. By adding a drop of glycerine, on the contrary, the amœba is suddenly contracted, and forms a small, almost homogeneous lump. If we substitute water for the glycerine, the amœba always changes into a granular globule, in which the original structure is again plainly visible, though the globule is motionless and apparently dead.

The changes in the infusion just described allow the conclusion that living matter appears at first in the form of a small granule only; gradually through differentiation becomes a vacuolized body, in which it forms a framework, and is at last arranged as a network; the latter state being that of common protoplasm. As one and the same granule cannot be followed up in its gradual development in the infusion, we must look for other living corpuscles, to see these changes directly. Such corpuscles are those suspended in the blood of the common fresh-water crawfish (*Astacus fluviat*).

For examination of the blood, we prepare the covering-glass by greasing its edges on one surface with olive-oil. If we break off the leg of the living animal, fresh from the river, a drop of the colorless blood will ooze out, which being caught on the slide, and covered with the oiled covering-glass, remains unchanged, as the evaporation of the plasma is prevented. No other preparation than that for producing a so-called "moist chamber" in the simple way mentioned is required for the examination of the blood of cold-blooded animals.

Immediately after placing the blood upon the slide, most of the blood-corpuscles look coarsely granular, viz., are filled with shining, yellowish, round granules. Shortly afterward every granule begins to enlarge and flatten; so much so, that by mutual accommodation the granules become polyhedral, being separated from each other by small hyaline seams, which are traversed by very distinct, grayish, intersecting threads. Soon every flattened granule is provided with one or two vacuoles; the yellowish substance surrounding the vacuoles suddenly commingles with the same substance of neighboring granules, and, as if bursting, is transformed into a delicate, finely-granular network, in the midst of which a formerly invisible nucleus can be seen. The nucleus remains immovable, while the body, now pale and finely granular, still changes its shape.

In the blood-corpuscles of crawfish, therefore, the changes of the granules, from originally solid, homogeneous bodies into vacuolized ones, and at last into a delicate network, can be seen directly in the course of about half an hour. The body resulting from the changes of the granules of the blood-corpuscle is analogous in every respect to the amœba.

Colorless blood-corpuscles of the newt (*Triton*, *Salamandra*) and the frog can also be used for the study of the structure of the protoplasm with a very satisfactory result. By cutting off with scissors the point of the tail of a newt, or a toe of a frog, we are enabled to transport a drop of blood directly to the slide, and by covering the drop with a thin glass, oiled on its edges, we obtain admirable specimens for examination even with the highest powers. The finely-granular, colorless blood-corpuscles of the newt show, at the common temperature, continuous changes of shape and place by projecting a great number of delicate offshoots in all directions, and again retracting them. During this time the grayish or yellowish network in the interior of the body is also constantly changing in shape. Very often vacuoles appear in the body, and sometimes the body looks as if perforated by vacuoles, like a sieve. In such a body the identity of the framework surrounding the vacuoles, and of the network inclosing hyaline spaces of varying sizes, can easily be proved; at all events, the body reveals a sponge-like structure. Excellent subjects for watching the structure with high powers are also the colorless blood-corpuscles of frogs.

Blood-corpuscles of mammals and of man must be examined on a heated stage, in order to raise the temperature of the specimen to that of the body. The specimen is easily obtained by pricking the palmar surface of the hand. At the common temperature of the room no structure is recognizable in my own colorless blood-corpuscles, but the structure becomes the plainer the more the temperature of the stage approaches the normal heat of the body. There appear one or two grayish, homogeneous lumps in the interior of the corpuscle, and from the periphery of the lumps many conical, slender, grayish threads emanate, which unite with other threads and form at their points of intersection somewhat thickened nodules, or granules, the whole constituting a complete, grayish network throughout the corpuscle. A continuous grayish layer circumscribes the periphery of the corpuscle, in close connection with the most external threads. While the temperature rises slowly, continuous changes in the shape of the network and of the whole corpuscle take place; but locomotion occurs only if the specimen has been inclosed between two thin glasses, which furnish the corpuscles with points of fixation. Distinct nuclei, with nucleoli, all united by means of grayish threads, appear only when the motion of the corpuscles becomes slow, or when the corpuscles approach the state of rest, viz., that of death.

In colostrum-corpuscles, present in milk during the first days after delivery, the network is also plainly visible; many of the granules are here changed into shining fat-globules, but are still in connection with their unaltered neighbors. Later on, all the granules of the colostrum-corpuscles appear to be transformed into fat-globules.

The blood-corpuscles of the crab, and especially those of the oyster, are also excellent for studying the structure of protoplasm. If we break the shell of an oyster and cut the animal, we may bring its colorless blood under the microscope and watch the structure of the blood-corpuscles, and their striking changes of shape, and even their locomotion. We always see before us organisms entirely identical with different forms of amœba.

Lastly, I may mention that products of inflammation, pus-corpuscles, as long as they are alive, show exactly the same structure and capability of creeping as are visible in an amœba; the latter fact having been discovered about ten years ago by Von Recklinghausen, of Strasburg. All the elements of the body, including those of the tissues, agree with the amœba in respect to their structure and viability.

Before advancing in my discourse, I wish to say a word in regard to the correctness of my assertions, inasmuch as observations of so delicate a nature, with high magnifying powers, have always been liable to error.

There are two ways of satisfying one's self of the correctness of a microscopical interpretation: demonstration to others who are unprejudiced and impartial observers, and representation independent of our senses, viz., by photographs. Both means have been adopted with the discovery of the structure of protoplasm. Dr. L. Elsberg, who spent several months in examining the protoplasmic bodies in my laboratory, arrived at the conviction that my views are correct, and announced this conviction in the "Transactions of the American Medical Association" in 1875. Dr. Elsberg is of opinion, in which I agree with him, that no preliminary studies in microscopical science are required for seeing the intimate structure of the living elements. An unprejudiced observer, with a practice of a few days, will be able to satisfy himself in regard to matters which have been overlooked by many experienced microscopists, apparently because of their prejudices or belief in assertions of authorities. Besides Dr. Elsberg, many gentlemen, and also a lady, have satisfied themselves of the truth of the structure of protoplasm during the courses of instruction in histology which I have given in my laboratory for two years. Dr. J. J. Woodward, of Washington, has published beautiful photographic plates of cancer-specimens, made with oxycalcium-light, with relatively low powers, and on these plates the structure of the protoplasm is plainly visible to the naked eye, wherever the elements lie in a correct focus. The objection that this structure might perhaps be due to coagulation, to changes after death, falls to the ground, as on looking at photographs of living blood-corpuscles, such as have been produced by Dr. Cutter, of Boston, the network is as plainly visible as in the plates of Dr. Woodward. Doubtless the photographs of living and creeping amœbæ would give the same result.

Those, however, who are delighted with nice staining of microscopic specimens, splendid projections on screens, and large micro-photographs, generally lose sight of the aim of the science of microscopy. We have other things to do than to play with methods of staining and projections. We have to study the relations of physiological and morbid appearances to their anatomical bases—a more serious and difficult task. Photographing microscopical specimens has reached its highest perfection in this country, where technical talent is so remarkably developed. Although such photographs are useful in certain respects, their value should not be over-estimated, because they are indistinct wherever the specimen is not even or shows several strata. Under such circumstances photographs can hardly replace drawings made by an experienced and conscientious artist.

Let us proceed now to the consideration of the structure of protoplasm as explained schematically. Judging from the observations in an infusion, or in blood-corpuscles of craw-fish, it is plain that living organisms originally form homogeneous lumps. These, with advancing growth, are differentiated by the formation of vacuoles into a framework, and finally into a network. In both latter states we distinguish two substances, one identical in every respect with the substance forming the first homogeneous lump, the other contained in the vacuoles and in the meshes of the fully-developed protoplasmic body. The substance forming the framework and afterward the network is endowed with the properties of contractility, and—as it originated from a small lump—

growth; therefore it is living matter. On the other hand, the substance contained in vacuoles, and in the meshes of living matter, never presents signs of life, being a fluid. That it is not pure water is proved by the phenomena of diffusion on adding a drop of water to the specimen. The solid nucleolus, the solid nucleus, the granules, their uniting threads, and the surrounding layer of the whole body, are formations of living, contractile matter, which are suspended in a non-living fluid; i. e., the network contains in its meshes and incloses as a shell on the surface of the corpuscle, and also in a hollow nucleus, a non-contractile fluid. The fully-developed protoplasmic body, therefore, is constructed like a sponge, but, at the same time, inclosed on all sides by the same substance which forms the trabeculæ of the sponge—the trabeculæ and the shell being the living matter.

An analysis of the observations of the living protoplasmic body teaches us that there can be distinguished mainly three different appearances of the net-like living matter, namely, that of rest, that of active contraction, and that of passive extension.

In the state of rest, as seen in a motionless amœba, or immediately after death, the granules are almost uniformly distributed throughout the protoplasm, united with each other by slender threads, the bridges of living matter. (*See* Fig. 1.)

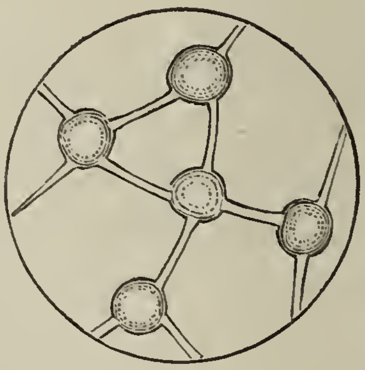

FIG. 1.

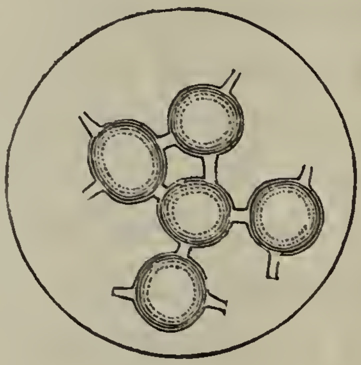

FIG. 2.

In contraction we observe an enlargement of the granules by shortening of their uniting threads and approximation to each other. (*See* Fig. 2.) Nothing has been added to the living matter and nothing lost from it; only the distribution of the plastidules has changed, leading to the narrowing of the network and a partial expulsion of the fluid formerly contained in its meshes. Contraction is the active property of living matter, and on it are based the simple change of shape and the locomotion of the whole organism.

Extension depends upon a decrease of size of the granules, with a removal from each other and an elongation of the uniting threads at the expense of the bulk of the granules, even to the disappearance of all structure. (*See* Fig. 3.) The extension takes place in a passive manner; the fluid contained in the meshes of the living matter is pushed out toward the periphery, and there leads to the formation of a protruding offshoot—the hyaline flap. At the beginning of the protrusion we still observe in the flap the presence of structure, while at the highest point of extension the structure can no longer be seen, because granules and threads have been elongated to their utmost capability. We may compare this phenomenon to the extension of glass rods melted on a flame until the threads become so thin as to disappear to the naked eye.

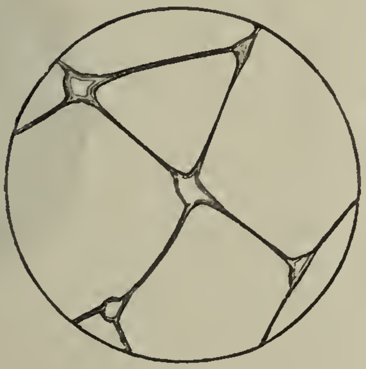

FIG. 3.

These three states of living matter explain to us not only the movement of a simple protoplasmic lump, but also the action of the most highly-developed muscles, which, as I have demonstrated, are entirely identical in their structure with the simple amœba. Were the amœba a sponge without an inclosing layer of living matter on its surface, every contraction would lead to an escape of the fluid, and no locomotion would be possible; the presence of an outer, although very thin, layer of living matter is necessary to the various movements of living protoplasmic bodies.

By adding a drop of glycerine to the creeping amœba, or to any protoplasmic body, we can bring about a fourth state of living matter, viz., the highest degree of contraction, for which S. Stricker and I have proposed the term "tetanus." The fluid of the protoplasm being suddenly extracted by the glycerine, all granules flow together, forming a structureless lump of much smaller size than that of the original corpuscle, without visible limits of the single granules. (*See* Fig 4.)

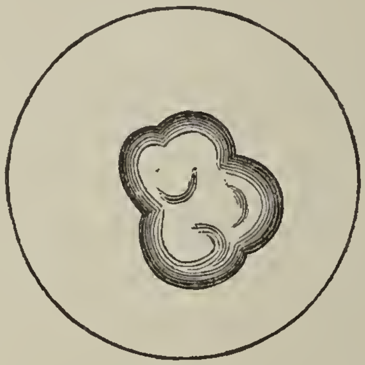

Fig. 4.

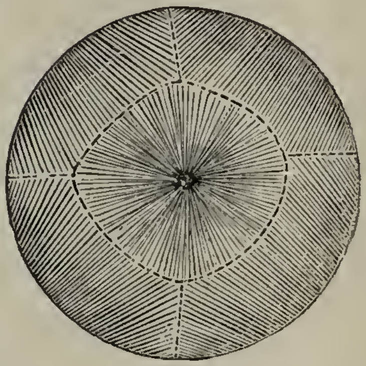

Fig. 5.

As mentioned before, a rehabilitation of the former net-like structure is produced by taking away the glycerine and adding water, without reëstablishment of motion.

All these changes of living matter can be directly seen under the microscope. But we cannot observe the formation of a flat, extended layer at the boundaries of the whole body, at those of a hollow nucleus and of every vacuole. I therefore had to have recourse to the hypothesis that a granule may send out offshoots in great number, leading to the disappearance of the central mass, and that these offshoots, melted together, may produce a continuous layer. (*See* Fig. 5.) By the union of many such areas an extensive layer could be produced, large enough to cover in the whole protoplasmic body.

The presence of a layer of living substance on the oute surface of the body explains to us why every protoplasmi lump can so easily take up foreign bodies, and why vacuole can form and disappear almost suddenly. We must imagin that the living matter is capable of entering any of the de scribed states at any time, so that a flat layer, for instance may immediately change into a network, and *vice versa* When the lump swells up through the addition of water, th granules are torn apart and float freely in the fluid, as occurs in swelled amœbæ and saliva-corpuscles. The breaking of the outer shell, with escape of minute particles of the amœba, still endowed with life, and the process of the division, can also easily be understood.

Let us now draw conclusions from the observations described.

Protoplasm is not structureless, but has a very distinct net-like structure. The protoplasm, forming a so-called "cell," possesses a very complicated structure, and therefore the cell, in the sense of M. Schultze and E. Brücke, is not an elementary organism. As stated above, every particle or granule of living matter, very many of which go to build up a protoplasmic lump, is endowed with all the properties of the so-called "cell"—growth and motion. The question is, How large must be a simple particle of living matter to entitle it to the name of an individual organism?

In the infusion we see growing granules, just perceptible to the highest magnifying powers of the microscope, in a fluid where there were none a short time before. S. Stricker, when examining the renowned Lostorfer's corpuscles, which for a short period of time were thought to be characteristic of syphilis, made observations analogous to those which I have described. He saw extremely small granules originate in the plasma of the blood of persons broken down by different diseases; the granules, which were first just perceptible, grew under the eyes of the observer, and, after having reached a certain size, divided into two parts, producing new individuals. Moreover, we know of minute organisms in decomposing organic tissues—the micrococci—which are just on the limit of perceptibility, and notwithstanding endowed with motion and growth. It is plain, therefore, that the size of a living body is irrelevant in the definition of an organized individual. The smallest which we are capable of seeing with the best microscopes of to-day are granules; but we must admit that germs or particles of living matter may be present in the air or in organic fluids in infinite numbers which cannot be seen at all, and become visible only after having reached a certain size.

How complicated the structure of a minute particle of living matter may be we can hardly imagine.

The term "cell," as proposed by Schleiden and Schwann, had long been considered as a misnomer, since M. Schultze demonstrated the absence of a lining membrane and fluid contents. I have demonstrated that the so-called "cell" is not an elementary organism, but that it is composed of innumerable particles of living matter, every one of which is endowed with properties formerly attributed to the cell-organism.

According to my observations, we have not to deal with "cells" as form-elements, either in the fluids or in the tissues of the animal body, but only with living matter, varying in its appearance from the just-perceptible granule to the bulk of the body of the largest animal itself. Single lumps of living matter may show the net-like arrangement, being then termed "protoplasm;" while the body of a mammal is a continuous mass of living matter in net-like arrangement and contains fluids, in which there are suspended isolated bodies, analogous to the granules which float in the vacuoles of an amœba. The difference in the aspect of the tissues depends on the presence of a lifeless basis-substance only, a derivative of the lifeless protoplasmic fluid, while essentially all tissues are formed by protoplasm, in which living matter without interruption is united throughout the body. I may add that, according to my recent investigations, plants are built up in a way exactly corresponding to animals.

Let us give up the term "cell," as now no proper sense is connected with it; let us give the usual name to every organism, amœba, for instance, or say blood-corpuscle, pus-corpuscle, cartilage-corpuscle, etc., if we intend to designate separate lumps of protoplasm, or certain constituent parts of different tissues.

In conclusion, I may draw attention to the fact that the amount of living matter varies greatly within a limited bulk of protoplasm, both in normal and morbid conditions. The colorless blood-corpuscles of persons exhibiting signs of lymphatic, strumous, scrofulous constitution contain much less living matter than those of strong, vigorous persons. Further examinations will in all probability teach us to make use of these differences for practical purposes. I announced three years ago that the protoplasmic lumps forming tubercle are characterized by a relatively small amount of living matter. Last year I published my observations on pus-corpuscles, which enable me, from the relative amount of living matter contained in an individual corpuscle, to say from what kind of organism such a pus-corpuscle is formed; whether the person from whom the pus comes is healthy and strong, or weakened by chronic disease, as tuberculosis.

I am thoroughly convinced that the doctrine here explained, for which Dr. Elsberg proposed the term "bioplasson-doctrine," must eventually be accepted by all judicious microscopists. The popularization of even the simplest facts takes time. Though at present objections to my observations may be raised, their correctness can never be shaken. The truth will finally triumph.

ART. II. — *Analysis of Seven Hundred and Seventy-four Cases of Skin-Disease, treated at the Demilt Dispensary during the Year* 1876, *with Cases and Remarks on Treatment.* By L. DUNCAN BULKLEY, A. M., M. D., Physician to the Skin-Department, Demilt Dispensary, New York; Fellow of the New York Academy of Medicine, Member of the New York County Medical and Dermatological Societies, Secretary of the American Dermatological Association, etc.

DURING the year 1876 there have come under my immediate observation and treatment seven hundred and seventy-four cases of skin-disease in the Demilt Dispensary, and I deem it my duty to the profession and to the science of dermatology to put on record, as far as possible, some of the esults of the experience gained there. I am the more enouraged thus to report the simple and practical details of dispensary practice in the (to many perplexing) field of cutaneous diseases, by the very flattering reception which has been accorded to the similar reports I have ventured to put forth of the two preceding years, 1874 and 1875;[1] this both in print in the journals and in letters of thanks, and further inquiry from many with whom I was personally unacquainted.

It has been a matter of surprise to me that the dispensaries of New York have not been used more for the purpose of clinical study and instruction; in the skin-department of Demilt there have been over thirty-one thousand new patients recorded on the books, while the total number of patients recorded in all the departments, during the past twenty-five years, amounts to more than six hundred thousand. During the past year nearly twenty-five hundred visits have been made by my patients alone. In regard to the advantages to be derived from a careful study of the practice of a dispensary department, I think the faithful attendance and diligent attention of the gentlemen who have been members of my classes in dermatology bear abundant witness, as also their repeated assertions.

In the present "Analysis" I shall follow the plan adopted in the two preceding ones, of making first a short statistical inquiry as to the relative frequency of the different forms of cutaneous affections, and afterward of entering more into detail in reference to the diseases presented, their variations, treatment, etc., illustrating where it seems best, by the introduction of such cases as may be of interest. Many cases have already been published in the *Archives of Dermatology* and elsewhere; some of these may be briefly alluded to a second time in the present article, either because their importance seemed to warrant it, or because of later developments, or to especially illustrate some portion of this study.

I have again to return my sincere thanks to my very faithful clinical assistant, Dr. Robert Campbell, without whose constant presence and aid it would hardly have been possible to secure the material for this and other reports.

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[1] Analysis of One Thousand Cases of Skin-Disease. *American Practitioner*, May, 1875. Analysis of Six Hundred and Seventeen Cases of Skin-Disease. *American Practitioner*, April and May, 1876.

The cases are presented in two tables, as before: in the first, arranged alphabetically, the number of instances of each disease and the sex of the patients are detailed; in the second table the diseases are arranged in the order of their frequency at this clinic, together with their percentage to the total number.

In recording the diseases I have still adhered to the course indicated in my last report, of endeavoring, as far as possible, to simplify dermatological nomenclature by using only well-known terms and employing always the same designations, which, when practicable, are the Greek derivatives for the primary names, and Latin for the secondary terms and expletives; for fuller explanation I must refer the reader to the former reports.

TABLE I.

DISEASE.	Males.	Females.	Total.	DISEASE.	Males.	Females.	Total.
Abscessus	....	1	1	Nævus	1	....	1
Acne	20	38	58	Pemphigus	....	1	1
Adenoma	2	....	2	Phthiriasis	40	53	93
Alopecia areata	....	1	1	Pityriasis	....	1	1
Carcinoma	....	1	1	Pruritus	8	4	12
Chloasma	....	2	2	Psoriasis	9	10	19
Dermatitis	10	13	23	Purpura	5	2	7
Eczema	134	144	278	Roseola	1	....	1
Epithelioma	3	4	7	Scabies	9	10	19
Eruptio e copaiba	1	....	1	Scrofuloderma	1	2	3
Erysipelas	6	7	13	Strophulus pruriginosus	....	1	1
Erythema	3	4	7	Syphilis	21	22	43
Furunculus	11	10	21	Tinea	24	14	38
Herpes	7	6	13	Ulcus	7	10	17
Hyperidrosis	3	1	4	Urticaria	15	13	28
Ichthyosis	2	....	2	Varicella	3	....	3
Impetigo contagiosa	3	6	9	Verruca	3	3	6
Lichen	9	21	30	Vitiligoidea	....	2	2
Lupus	....	4	4				
Macula pigmentosa	1	....	1				
Morphœa	....	1	1	Total	362	412	774

TABLE II.

Disease.				Number.	Per cent.
1. Eczema	Impetiginodes		96	278	36.
	Squamosum		26		
	Papulatum		24		
	Rubrum and erythem.		8		
	Intertrigo		5		
	Unclassed		119		
2. Phthiriasis	Capitis		57	93	12.
	Corporis		36		
3. Acne	Sebacea		3	58	7.5
	Punctata		7		
	Molluscum		0		
	Simplex		32		
	Indurata		6		
	Rosacea		10		
4. Syphiloderma				43	5.7
5. Tinea	Tricophytina	Tonsurans	9	38	4.8
		Circinata	8		
		Sycosis	7		
		Ecz. marginat.	1		
	Versicolor		9		
	Favosa		4		
6. Lichen	Simplex	Acutus	28	30	4.
		Chronicus	1		
	Planus		1		
7. Urticaria				28	3.7
8. Dermatitis	Traumatica		6	23	3.
	Calorica		5		
	Exfoliativa		4		
	Venenata		4		
			4		
9. Furunculus				21	2.7
10. Psoriasis				19	2.4
11. Scabies				19	2.4
12. Ulcus				17	2.1
13. Erysipelas faciei				13	1.7
14. Herpes	Zoster		8	13	1.7
	Labialis		3		
			2		
15. Pruritus				12	1.5
16. Impetigo contagiosa				9	1.1
17. Epithelioma				7	.9
18. Erythema	Multiforme		3	7	.9
	Nodosum		2		
	Calorica		1		
	Papulatum		1		
19. Purpura	Simplex		4	7	.9
	Hæmorrhagica		1		
	Rheumatica		1		
	Lichenoides		1		
20. Verruca				6	.8
21. Hyperidrosis				4	.5
Carried forward				745	

Disease.	Number.	Per cent.
Brought forward	745	
22. Lupus { Erythematosus....2 Vulgaris..........2 }	4	.5
23. Scrofuloderma	3	.4
24. Varicella	3	.4
25. Adenoma	2	.26
26. Chloasma	2	.26
27. Ichthyosis	2	.26
28. Vitiligoidea	2	.26
29. Abscessus	1	.13
30. Alopecia areata	1	.13
31. Carcinoma	1	.13
32. Eruptio e copaiba	1	.13
33. Macula pigmentosa	1	.13
34. Morphœa	1	.13
35. Nævus	1	.13
36. Pemphigus	1	.13
37. Pityriasis	1	.13
38. Roseola	1	.13
39. Strophulus pruriginosus	1	.13
Total	774	

Thirty-nine separate names of diseases are found in the above tables, which really represent a yet larger number of diseases: thus, under the generic term tinea are grouped all the vegetable parasitic diseases, of which favus and pityriasis or tinea versicolor are certainly quite distinct affections, and not related at all to the third variety, tinea circinata; under dermatitis are included both simple traumatic inflammation of the skin, that from heat and cold, and also that from the effect of local poisons, as the poison oak or ivy eruption, etc.

The total number of cases were pretty evenly divided between the sexes, three hundred and sixty-two males to four hundred and twelve females, the proportion being almost exactly that of last year, namely, about forty-seven per cent. males.

In regard to the age of patients as affecting the development of skin-diseases, dispensary statistics must always afford but meagre and unsatisfactory information, for the statements of quite a proportion of this class of patients in regard to the time of commencement and duration of the disease are very uncertain; in some instances of psoriasis the disease had already lasted many years, and one case of lupus had been in existence for over thirty years before being entered on our books. But some interest or importance may be attached to the ages of the patients who were actually under treatment, and these are exhibited in—

TABLE III.

Age of Patient.	Males.	Females.	Total.
6 months and under	13	14	27
6 months to 1 year of age	8	7	15
1 year to 2 years of age	24	9	33
2 years to 3 years of age	21	11	32
3 years to 4 years of age	8	13	21
4 years to 5 years of age	9	5	14
Total 5 years or less of age	83	59	142
5 years to 10 years of age	42	52	94
10 years to 15 years of age	24	42	66
15 years to 20 years of age	39	58	97
20 years to 25 years of age	32	32	64
25 years to 30 years of age	30	36	66
30 years to 35 years of age	22	16	38
35 years to 40 years of age	18	36	54
40 years to 45 years of age	11	15	26
45 years to 50 years of age	18	33	51
50 years to 55 years of age	13	8	21
55 years to 60 years of age	10	13	23
60 years to 65 years of age	11	5	16
65 years to 70 years of age	4	3	7
70 years to 75 years of age	1	2	3
75 years to 80 years of age	4	..	4
80 years to 85 years of age	..	..	..
85 years to 90 years of age	..	1	1
Of unknown age	..	1	1
Total	362	412	774

It will be seen from this that almost one-third of all the cases of skin-disease occurred in children of ten years of age or under—two hundred and thirty-six, of which one hundred and forty-two were five or less years of age. The next decade furnishes the next largest number of patients, namely one hundred and fifty-three; from twenty to thirty years there were one hundred and thirty patients, and so on. In periods of five years, that from fifteen to twenty furnished more patients than any other, except the first five years of life: the excess was here made up by acne and parasitic affections, which together comprised more than one-half of the whole. No deductions can be drawn from these figures in reference to age affecting skin-diseases without taking into consideration at the same time the number of individuals living at each of the periods, as shown by the census; it would be of little service to attempt such calculations on the results of one year's practice. We shall hope to make such an investigation at some future time, based on the analysis of many years' cases in succession. Of patients from one to five years of age, about two-thirds were affected with eczema; from five to ten years, only one-third the entire number had this disease. The youngest patient under treatment was aged one month; the oldest, a woman of eighty-eight.

The largest number of patients were recorded during the month of July, the smallest number during December; it may be remembered that the summer was intensely hot, and the results were shown in the largely increased numbers of cases of acute eczema which applied for treatment, almost one-sixth of the entire number being recorded during the one month of July.

It may not be uninteresting to note that the first four diseases on our present list, namely, eczema, phthiriasis, acne, and syphiloderma, occupy the same positions as last year, with percentages almost the same: thus, eczema last year furnished 35.1 per cent. of all the cases, this year exactly 36 per cent.; phthiriasis gives 12 per cent. this year against 9.2 of last year; acne 7.5 against 6.9 per cent. in the preceding analysis; and syphilis was the cause of but 5.7 per cent. of the present collection of cases, against 6.3 per cent. of those treated last year, and 9.8 per cent. in the thousand cases analyzed from the preceding year. Psoriasis comes further down on the list than last year, where it stood eighth, with a percentage of 3.2; it now ranks tenth in order of frequency, with a percentage of but 2.4; further experience convinces me that psoriasis is much less frequent in this country, or at least in this city, than is generally thought.

Certain other differences are also observed on a comparison of these tables with those of last year, besides the varying proportions with which some of the diseases presented themselves for observation. It will be found that the present lists differ from those of last year in the absence of ten of the eruptions mentioned there, and in the presence of eleven others which are not found among the cases recorded during the previous year, and this is not from any differences in the manner of recording the cases, but simply from the natural variations in the clinic. Thus, of the diseases recorded at this clinic in 1875, the following have not been observed during 1876, namely: anthrax, clavus, elephantiasis græcorum, eruptio e potassii iodido, folliculitis capitis, keloid e cicatrice, onychia, paronychia, rubeola, and xeroderma; while eleven others not met with last year have been present in one or more instances, namely: adenoma, alopecia areata, carcinoma, eruptio e copaiba, ichthyosis, lupus, morphœa, pigment-staining, strophulus pruriginosus, and vitiligoidea. During the last two years no cases of true prurigo (Hebra) or of scleroderma have appeared at this clinic, though the case I have recorded as pruriginous strophulus might by some have been looked upon as prurigo, and the case of morphœa resembled scleroderma in some features, of which more will be said later.

As far as I can learn, but two patients belonging to this department have died during the past year, both with phthisis: one, a girl eleven years old, who had purpura; the other, also a girl, sixteen years old, who had had pemphigus—both of which cases will be mentioned later.

The separate diseases may now receive our attention, and will be noticed, as on previous occasions, in the order of the number of cases of each:

1. Eczema.—The very great frequency of this disease is well exhibited in our record of patients. During the past year two hundred and seventy-eight cases of eczema occurred in a total of seven hundred and seventy-four, or 36 per cent. of the whole. This is almost the largest percentage with which I am acquainted (except that of Dr. White, of Boston, who records eczema as forming nearly 45 per cent. of hospital out-patients, and Dr. Duhring, of Philadelphia, who

states that eczema constitutes almost 50 per cent. of the entire number of cutaneous diseases), and, although it exceeds that obtained from private practice in this city, must be taken as a fair indication of the prevalence of this form of skin-affection; for, while only the rarer or more obstinate cases come to the specialist, the rank and file of cutaneous diseases being treated by the family physician, in the dispensary all skin-cases, or a large share of them, are turned over at once to this department. The cases of eczema were pretty evenly divided between the sexes, there being one hundred and thirty-four males to one hundred and forty-four females; last year the males preponderated by two, 110 : 108.

The ages of patients applying for treatment with eczema may be seen in the following:

TABLE IV.

AGE OF PATIENT.	Males.	Females.	Total.
6 months and under	7	12	19
6 months to 1 year of age	5	3	8
1 year to 2 years of age	20	5	25
2 years to 3 years of age	14	7	21
3 years to 4 years of age	3	8	11
4 years to 5 years of age	7	3	10
Total 5 years or less of age	56	38	94
5 years to 10 years of age	16	17	33
10 years to 15 years of age	3	6	9
15 years to 20 years of age	4	10	14
20 years to 25 years of age	6	7	13
25 years to 30 years of age	14	11	25
30 years to 35 years of age	11	4	15
35 years to 40 years of age	4	16	20
40 years to 45 years of age	4	7	11
45 years to 50 years of age	2	15	17
50 years to 55 years of age	6	2	8
55 years to 60 years of age	4	5	9
60 years to 65 years of age	1	2	3
65 years to 70 years of age	2	2	4
70 years to 75 years of age	...	...	...
75 years to 80 years of age	1	...	1
80 years to 85 years of age	...	...	...
85 years to 90 years of age	...	1	1
Of unknown age	...	1	1
Total	134	144	278

It will be seen that a very large proportion of the cases of eczema occurred in children, ninety-four of the whole number being five years or less of age, the next period of five years furnishing thirty-three cases, or a total of one hundred and twenty-seven, nearly one-half, in patients ten years of age and under; these figures correspond very closely to the ratios observed in my analysis of last year, and thus confirm some of the statements there made. From this will be seen the fallacy of drawing any conclusions in regard to the statistics of eczema from any clinic which does not include children. It will be remembered that Hebra's service at the hospital in Vienna is almost wholly made up of adults, children appearing there only as exceptions—certainly no cases of infantile eczema are included; the same is true of certain other clinics. The next period of greatest frequency of eczema was observed to be the years from twenty-five to thirty, which furnished twenty-five cases, the decade from twenty to thirty giving in all thirty-eight cases, corresponding to the observations of the preceding year: both years give a slight preponderance to males at this time of life.

The youngest patient treated with eczema this year was aged seven weeks, the oldest eighty-eight years; between these ages almost every month was represented up to the age of four years, and almost every year from that to seventy years, with but few exceptions. In some cases it was noted that the disease had lasted since the patient was one month old; one patient had had chronic eczema of the hands and arms for eighteen years.

Of one hundred and twenty cases where the location of the disease was recorded, it was found to affect the various portions of the body as follows: Face twenty-nine, head twenty-five, hands twenty-one, legs and feet ten, ears ten, arms seven, body seven, beard five, scrotum four, nails one, general eczema one. In many instances several portions were affected, but the eruption was here classified according to its most prominent or important location.

The two hundred and seventy-eight cases of eczema have presented very many different features, and have exhibited the disease in almost every possible phase, and have required many different methods of treatment. Some cases have appeared to be almost wholly dependent upon external causes, and local treatment alone has been employed, while in many local measures have been entirely withheld, or nearly so, in order to demonstrate the constitutional origin and nature of the eruption. In the vast majority of cases both internal and external treatment have been employed, and another year's experience but confirmation to the views so often expressed heretofore, that adds by this mode alone can we successfully treat eczema, in conjunction, of course, with proper dietary and hygienic measures.

We do not include under eczema every case which presents many of the features of this disease: thus, the pustular eruption in the scalp, resulting from the presence of pediculi, we exclude, placing it elsewhere, under the term phthiriasis capitis, as being no more a true eczema than is the polymorphous eruption of scabies, which is now universally separated from eczema. Hebra, in his report, still includes the eruptions of the head from lice as eczema, although he has long separated those caused by body-lice, under the title excoriations. We also count many cases as dermatitis where a lesion, which may resemble eczema in some features, appears to be purely local, from a local cause, and which heals upon its removal; and, finally, some of the cases which we designate as lichen might be classed as eczema by some writers; these we will consider under the head of lichen.

Our treatment of these cases of eczema has not differed much from that presented in the report of the preceding year, although certain cases have demanded variations from the generally-recognized lines of treatment, which we will call attention to. Eczema is very frequently attended with constipation, especially among the poorer classes, who habitually neglect themselves in this particular, and purgatives were used considerably and to much advantage in very many afflicted with eczema. In the more acute forms a ferro-alkaline laxative of sulphates of iron and magnesia proved very serviceable, although many at once required the tonic effect of bark, iron, nux-vomica, and arsenic, to which mixture was very commonly added the acetate of potassa, in doses from five to fifteen grains thrice daily.

In my last year's report I alluded very favorably to the action of arsenic given alone in eczema, especially in that of infants and young children. My experience since that time has fully confirmed all then said, and more too; and, as the results of my studies have been recently made public,[1] I will not enter into the matter very largely at the present time. I may, however, mention one or two cases which have been followed out since that was written. The following case shows how well the drug may be borne, and what results may be obtained from it:

Charles Carey, aged sixty years, a butcher, came first to the dispensary in January, 1876; he is a fleshy man, of medium height. He then had eczema on the forehead and about certain portions of the face, which yielded to treatment, and he was lost sight of until September 19th. He then appeared with a papular eczema, covering almost the entire body, extremities and head. On the face and hands there was some moisture, but the greater part of the eruption was made up of papules, closely set, and covering really all the body. Many of the papules were apparently of the color of the normal skin, and some portions of the eruption could readily have passed for the true prurigo of Hebra; very many of them, perhaps the greater part, were of a red color, more or less acuminate, and answered to those of lichen; on disappearing, all of them left brownish-red stains, so that at a distance the appearance was as if there was still an eruption, but, on passing the fingers over the surface, no elevations were perceptible. On the backs of the hands and fingers the eruption was wholly eczematous.

The itching from the eruption was intense; the man was a very great sufferer, and all parts of the body bore the marks of much scratching. He was given pills of blue mass, colocynth and ipecac, to be repeated on the second night, and the following external application was ordered: ℞. Olei cadini, ℥ss; olei morrhuæ, ℥vj. M. Sig.: Anoint the whole body twice daily. The relief obtained by the treatment was considerable; and, on September 26th, the following was prescribed: ℞.

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[1] The Use and Value of Arsenic in the Treatment of Diseases of the Skin. D. Appleton & Co. 1876. Reprinted from the New York Medical Journal, August, 1876.

Solut. De Valangin, ℥ ss; aquæ, ℥ ivss. M. Sig.: Commence with one teaspoonful three times daily, after eating, and increase as ordered. This mixture contains one drop of the solution of the chloride of arsenic in each ten, so that each teaspoonful represents six drops of the arsenic. The dose of this was gradually increased by taking an additional teaspoonful every two or three days, until, on November 21st, he was ordered to take three teaspoonfuls of the mixture, or eighteen drops of De Valangin, three times daily. The eruption was then wellnigh gone; there had been little or no itching for some weeks; the patient was in fine health and spirits; the site of each papule was plainly visible in the discolorations already alluded to, but all papular feeling was gone. Two weeks later, it was recorded that he was taking four teaspoonfuls of the mixture, or twenty-four drops of De Valangin's solution (equivalent to nearly ten minims of Fowler), three times daily. There was then some little pain at the pit of the stomach and slight soreness of the eyes; the arsenic was stopped, and compound cathartic pills given, also acetate of potassa. There had been no disagreeable symptoms until the full dose mentioned was reached; thus, while taking four teaspoonfuls, or twenty-four drops, morning and night, and three teaspoonfuls at noon-time, no inconvenience occurred.

The very rapid and visible diminution of the size and number of the papules following the use of the arsenic was strikingly confirmative of the results reported in my last "Analysis," especially of those in reference to the boy Thomas Hayes, five years old, who increased the dose of arsenic up to twenty drops of Fowler thrice daily, with the result of rapidly removing an eczema which had resisted all treatment since infancy. I may report further, in regard to the case of Thomas Hayes, that he returned, on July 13th, with a slight relapse, which yielded to treatment very soon; and again, in October, with another more severe attack, which again responded to arsenic very promptly.

In my last report I made especial mention of De Valangin's solution of the chloride of arsenic, which I had been using with advantage. This I have employed largely during the past year, and with good effects; I am not yet prepared to say wherein or in what cases it is superior to other forms of arsenic, especially Fowler's solution, but I think I have found it to agree with the stomach better than the latter, which might be inferred from the fact that its acid corresponds very closely with that of the normal gastric juice; also, as a rule, rather less arsenic is required, in total amount, when this preparation is used; moreover, it can be often combined very advantageously with acid preparations, as muriatic acid and the tincture of chloride of iron, etc. Furthermore, we can sometimes get results from a change in the form of arsenic employed, just as in the use of iron; one preparation will sometimes prove very beneficial when others seem almost inert, or even harmful.

I remarked last year that I had used cod-liver oil less that year than during the preceding year, the class of patients not seeming to require it so much; this I have found still true, and have employed such remedies as acetate of potassa and sulphate of magnesia more. I have used the sirup of the iodide of iron very considerably in the eczema of children, and with good results, though in the main I have adhered to the treatment mentioned in my last report, namely, calomel once or twice a week in mild, purgative doses, with a ferro-arsenical mixture, generally containing also a little acetate of potassa.

Among the poor, as also among the rich, there is constant need of advice concerning the diet in patients with eczema. Especially do I find that most of the infants and children with this disease are fed either with large amounts of starchy foods or else upon the diet of adults, and very rarely have I found an infant with eczema whose diet has been either exclusively the mother's milk or exclusively cow's milk; when this is the case, I frequently find that the feeding is excessive, and too frequent and irregular, or else that the mother, if she is nursing the child, is either in very poor health or living on markedly erroneous diet, especially in the way of the use of much tea or of fermented liquors. I never allow nursing-women to take ale, beer, or the like, or wines, with the delusive hope of making abundance of good milk, but always insist that they shall, if possible, consume a large quantity of milk themselves; and, if alcohol is wanted, I prefer much to give it in the way of the tinctures, or the distilled liquors, especially whiskey, in small quantities. Prolonged lactation I find to be very common in cases of infantile eczema.

As an illustration of some of the difficulties attending dispensary practice, showing also the manner in which advances may occasionally be made in therapeutics by the mistakes of patients, I may mention the following case:

Sarah McM., aged twenty-three, a cook, came for the treatment of an acute eczema of the head on December 5th. The whole head was the seat of an exuding eruption; and her hair, which was of moderate length, was matted together in what appeared to be an irreparable confusion. She was given cod-liver oil, with directions to soak the head thoroughly with it three times, that is, on returning home, again at bedtime, and in the morning to add fresh oil; and then, at the expiration of twenty-four hours from the first application, she was to wash it out thoroughly, once only, with Castile soap and warm water, and to again apply the oil half an hour afterward. She was also given the following, with directions to take one teaspoonful after eating: ℞. Potass. acetatis, ℥j; tinct. gent., ℥j; aquæ, ℥iij. M. By mistake she took the cod-liver oil internally, and employed the medicine externally, using it up in three applications, and then washed the head as directed the next day, but applied nothing afterward. The result was that, on the second day, December 7th, she came with the head very greatly improved, the exudation had entirely ceased, the hair was combed out in full length, and, in a word, better results were accomplished than had been looked for under the treatment directed. She was then directed to reverse the order, and use the oil externally, and take the acetate of potassa as prescribed; and five days later, or one week from the first visit, the scalp was about normal, except some scaling, for which the following was ordered—℞. Ung. hydrarg. nitratis, ʒj; ung. simplicis, ʒvij; M.—under which the scaliness is disappearing.

It is well to bear in mind that two distinct skin-diseases may, and do, not infrequently, affect the same individual at the same time, and thus the symptoms of one mask those of the other. Thus, in two instances, infants had both eczema and infantile syphilis at the same time; and a third appeared early in the year with eczema, and six months after with syphilis. One of these cases has already been reported;[1] in the other case the infant had been under treatment for some time for a rebellious eczema, when, quite suddenly, a general papular syphilide, of unmistakable character, appeared over the whole body. I may, in this connection, mention also the case of a man, aged thirty-six, with constitutional syphilis, on the flexor surface of whose left wrist was a papular syphiloderm, which so completely resembled a patch of chronic eczema that it was diagnosed as such for a moment, until further investigation revealed a history of syphilis, and a tubercular eruption of the same was found on the scalp. He was put on mixed treatment with but little effect, when it was stopped and mercurial inunctions substituted, and the patch rapidly disappeared. In another patient, a German woman, aged forty-five, there was well-marked eczema on the hands, arms, face, and ends of fingers, all of which improved promptly under specific treatment, there being a very plain history of syphilis.

During the past year, partly for economy, and that patients might have a large supply of the article, I have made considerable use of mutton-tallow and cod-liver oil, in about equal parts, as a dressing in eczema, and with very good results, as I have mentioned on several other occasions. The tallow should be very fresh; it is tried out, and, when melted, is mixed with cod-liver oil in about equal quantities, more or less according to the weather, and the two are stirred till cold. This is spread thickly on cloths and laid on the part, either alone or after the application of such other treatment as the case demands.

One case of eczema of the hands deserves special mention, from the excellent results obtained by means of rubber gloves. A German woman, aged twenty-seven, married, whose husband was a confectioner, and whose hands had been continually subjected to injurious influences, as in making ice-cream, etc., came to Demilt in April with eczema of the hands, which received benefit, and she soon disappeared from observation. Early in the fall she returned with the same trouble, but very much worse: the palms were hard and deeply fissured, and the eruption extended to both the palmar and around to the dorsal aspects of many of the fingers; the hands were completely useless for work, and the suffering from them intense. She was placed upon the same measures which had proved efficacious in the spring, but the result was very unsatisfactory. On October 24th she was ordered to procure two pairs of rubber gloves, and to wear one pair at night and the other pair during the day; some of the local measures were also continued. The change in about a week was marvelous to one not accustomed to the effect of impervious dressings: the cracks had almost entirely disappeared, and the palms were as soft and flexible as could be wished. To see how far the tissues were really altered, the gloves were discontinued for a few days, shortly after this, and the parts thickened and hardened and cracked soon to a very considerable extent. The gloves were resumed, but as the eruption improved the patient became somewhat restless under the continued cumbering of the hands, and neglected to wear them as persistently as was intended. A number of cracks occurred, which were touched thoroughly with a stick of pure nitrate of silver, and healed rapidly. Other measures were used at times to hasten the restoration to health of the parts, but the gloves formed the main-stay of treatment, and the result has been a speedy and complete removal of the disease. She has used up several pairs of gloves; but, considering her occupation, which she has been thus enabled to carry on, she has willingly borne the expense.

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[1] *Archives of Dermatology*, July, 1876, p. 313.

While under this treatment eczema appeared in subacute form on the forehead, whereupon she was given internal treatment as well; at a later date she brought her little child, also affected with eczema, both of which facts go to show that the eczema of the hands was due to other than purely local causes.

In a case of pretty severe eczema of the scrotum in a man aged thirty-five, it was suggested by a physician attending the clinic to use a solution of sulphate of iron locally (ʒij ad aquæ Oj), which was followed by mutton-tallow, together with appropriate internal measures; the results were very unfavorable: the disease was made decidedly worse, and this treatment was abandoned. The case proved a rebellious one, but was finally discharged cured after two and a half months' treatment.

In another place[1] I have reported a case of chronic localized eczema of the back of the left hand in a woman aged thirty, which was very successfully treated by first painting the spot several times a day with a solution of gutta-percha in chloroform. She was enabled thereby to do washing, and the improvement in the eruption even under the circumstances was very marked; subsequently the compound tincture of green soap of Hebra and diachylon-ointment removed the infiltration and cured the case.

A widow woman aged thirty-six, who had an obstinate eczema of the right leg due to varicose veins, made very rapid improvement as soon as she was forced to seek work which compelled her to walk about two or three miles daily; she then bandaged the leg, which she had been previously directed to do, but had failed to accomplish, because she thought it gave too much pain.

2. PHTHIRIASIS.—Lice were recognized as the distinct exciting cause of skin lesions in ninety-three patients, forty males and fifty-three females; these cases presented no peculiarly interesting or unusual features, and require no special comment. Phthiriasis capitis was treated almost universally on the plan mentioned in former reports, namely, by repeated saturations of the head with kerosene oil, with subsequent washing and inunction with zinc, or weak white-precipitate ointment, when there were any raw surfaces left. Phthiriasis corporis was generally treated with the lotion of carbolic acid and caustic potash, as in former years.

3. ACNE.—Next in order of frequency of occurrence comes acne, with fifty-eight cases, twenty males and thirty-eight females. The nearly double number of females indicates in

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[1] *Archives of Dermatology*, April, 1876, p. 222.

part only the greater liability of this sex to acne, inasmuch as males, especially among the lower classes, give less attention to such cutaneous disorders as do not affect their physical comfort. The percentage of cases will be found to be somewhat greater than during the previous year, 7.5 being the proportion this year against 6.9 per cent. the year before.

The ages of patients applying for the treatment of acne are shown in the accompanying table:

TABLE V.

AGE OF PATIENTS.	Males.	Females.	Total.
At 13 years of age	..	1	1
At 14 years of age	..	3	3
At 15 years of age	..	3	3
At 16 years of age	3	5	8
At 17 years of age	1	3	4
At 18 years of age	3	7	10
At 19 years of age	3	2	5
At 20 years of age	2	3	5
20 to 30 years of age	6	6	12
Over 30 years of age	2	5	7
Total	20	38	58

It will be seen that of nineteen patients who were seventeen or less years of age fifteen were females, all of these cases being, I believe, embraced under the terms acne punctata and simplex; one patient is entered at the unusually early age of thirteen. The oldest patient with this disease was a woman aged fifty-five, with sebaceous acne, who was a cook. One man, a sailor, aged forty-six, presented in a marked degree hypertrophic acne rosacea, the end of the nose especially being greatly enlarged, in irregular lumps, purplish, and with the orifices of the sebaceous glands greatly distended.

In one case, that of a woman,[1] aged forty years, acne had produced a disfiguration which so closely resembled smallpox that it was difficult to believe that the deep cicatrices were not the result of the latter disease. The lesions were grouped under the name acne indurata and rosacea, and the appearance may be thus described: The entire face was greatly reddened, and about the nose, cheeks, forehead, chin, and neck, numerous purplish lumps or masses of induration were clearly distinguishable at her first visit. Some were painful on pressure, others not; and from many of them an appreciable amount of pus was obtained by a deep thrust of the lancet, but few had any pustular summits. The entire face and neck was the seat of numerous depressed cicatrices of various sizes and shapes, most of them pale, but some red, being of more recent formation. All the surface was very greasy, the skin thick and doughy, and the orifices of the sebaceous glands gaping, with no comedones. The patient was a seamstress, and presented many of the symptoms of dyspepsia: pulse, 120, and weak; tongue coated, pale, and flabby. The case has received the most marked benefit from the use of the following, and is still under treatment: ℞. Potass. acetat., ℥j; ext. tarax. fl., aquæ, āā ℥ij. Signa: Take a teaspoonful half an hour before eating, well diluted; the diet and other elements were also attended to; locally, she used only hot water to the face, and the tubercles were mostly opened as soon as pus could be discovered; some of the smaller pustules were treated by scraping with the *dermal curette.*

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[1] *Archives of Dermatology*, January, 1877, p. 131.

I have treated quite a number of cases of acne during the past year by means of this latter little instrument, and really have found it of much advantage in many instances. For those unacquainted with it, I may say that it is simply a small, spoon-like steel instrument, with sharp edges, resembling somewhat those used in gynecological practice, but with a shorter handle. The idea of the *curette* in acne is to remove mechanically the impediments to the free excretion of the sebum, and it is used to scrape off the summits of the pustules and large papules of acne simplex, and to remove the epithelial clogging of the glands in some cases of punctate acne. I simply scrape the surface, removing the contents of pustules (generally causing a small amount of blood to flow); I then apply minute portions of cotton to each bleeding or exuding pustule or papule; this adheres for a few minutes, may be then brushed off, and the abrasion is dried; a small crust may be formed which falls the next day, and the pustule, which might and probably would have taken from one to three weeks in running its course, is brought to a termination in twenty-four hours or so. Of course no scar is left by this procedure, as the pus accumulations thus removable are located only beneath the epidermis; where there are large lumps or masses, round on top, the pus cannot be reached by this method, but these should be at once opened by means of a perpendicular thrust of a lancet, in order to avoid disfiguration, such as had occurred in the case just mentioned.

In one boy, aged eighteen, I treated one side of the face by this means alone, the other side being left untreated, and the difference was very perceptible, and that after only one or two scrapings. The process was repeated about a dozen times in this case. This method is not recommended as a substitute for other treatment, but is a valuable addition to other means in both public and private practice, especially when it is desired to accomplish results very quickly, as for any particular occasion. With this local procedure may be mentioned also the well-known method of forcing the black-headed sebaceous plugs from their beds by means of a watch-key, or, better, by a small metal tube with a round, smooth end, with an aperture of about $\frac{1}{32}$ of an inch; this I have made almost daily use of at the dispensary.

The same etiological elements have been noted in acne during the past year which have been observed in the years gone by, and the impression is deepened in my mind that sebaceous disease is very intimately associated with disorders of the digestive system, and can be best managed by a most careful regulation of this latter. The treatment, therefore, of acne has consisted very largely in directions about diet and hygiene, and very many cases have received laxative remedies, the most common, probably, being a pill of aloes and iron, given regularly with the meals, the number being slowly diminished, as a more normal action of the digestive organs ensues. I have still used De Valangin's solution of arsenic, as mentioned in my last "Analysis," and with very favorable ultimate results in a number of cases of acne.

It is believed and stated by writers on the eye that acne ciliaris and affections of the Meibomian glands depend on the same causes as ordinary acne, and will not uncommonly be found associated with it; in but two cases was ciliary acne observed in connection with acne simplex, and once Meibomian disease was associated with hypertrophied acne rosacea.

4. Syphilodermata.—Forty-three new patients came under treatment for syphilis during the year; of these, twenty-one were males, and twenty-two females; the percentage of these syphilitic diseases in the total number is but 5.7 per cent. against 6.3 per cent. of last year, and 9.8 per cent. of the year before. It would be gratifying if we could feel that this was an indication of the decrease of the disease in our midst, but in our judgment this is far from being the case, the contrary rather being true. The following are the ages of the patients with syphilis:

TABLE VI.

Age of Patients.	Males.	Females.	Total.
6 months and under	2	..	2
6 months to 1 year of age	1	1	2
1 year to 2 years of age	..	1	1
2 years to 3 years of age	..	1	1
3 years to 4 years of age	..	..	..
4 years to 5 years of age	..	..	..
Total 5 years or less of age	3	3	6
5 years to 10 years of age	..	..	..
10 years to 15 years of age	1	..	1
15 years to 20 years of age	2	1	3
20 years to 25 years of age	6	4	10
25 years to 30 years of age	4	5	9
30 years to 35 years of age	..	2	2
35 years to 40 years of age	2	2	4
40 years to 45 years of age	1	3	4
45 years to 50 years of age	1	1	2
50 years to 55 years of age	..	1	1
55 years to 60 years of age	1	..	1
Total	21	22	43

The six patients with infantile syphilis were aged respectively seven weeks, eight weeks, seven months, eight months, thirteen, and twenty-six months. It will be seen that there were no patients with syphilis between the ages of twenty-six months and fifteen years, the period between the common development of hereditary syphilis and the age of its usual acquirement; the decade between twenty and thirty furnished nearly half the cases; the oldest syphilitic was a male, aged fifty-eight. It will be remembered that these cases do not include primary sores, except under rare instances, where cutaneous or other constitutional manifestations have already appeared; these statistics, therefore, represent more correctly the real presence of constitutional syphilis among us than would those drawn from a venereal department, inasmuch as certainly a large share of the cases of syphilis manifest at some time cutaneous phenomena, and would, therefore, when applying to the dispensary for relief, be referred to this department. The total proportion, then, of syphilitic cases to all other cases of skin disease during the past two years has been just six per cent.

The youngest patient recorded with acquired syphilis was aged nineteen, a female; there were two males aged twenty—these were all who were twenty or less years of age. One patient, aged fifteen, a boy, is recorded with syphilis; but it was impossible to discover whether the disease was acquired or the result of hereditary influences. The lesions had existed four years; the case is still under observation, and will be reported on later.

Very unusual interest has been attached to the cases of syphilitic disease during the past year from the great variety presented and the rarity of some of the lesions. The disease has been observed from the earliest manifestation of constitutional symptoms to the development of lesions occurring many, many years after infection, from the most superficial macular eruption appearing while the chancre was still present, to the most profound destruction of tissues and the implication of nerves, bones, the eye, etc.

Two cases of chancres of the breast have been observed, in which the nursing infants were subjects of syphilis: the cases are still under observation, and, although there is some slight evidence that the disease was acquired, and not the result of paternal transmission inoculating in turn the mother, it would be premature to report the cases at the present moment either as sustaining or tending to overthrow any views in regard to the possibility of an hereditary syphilitic child communicating the disease to its own mother. Both children and both mothers made very rapid recovery, mainly on the use of mercurial inunctions, the chancrous ulcerations on the breasts cicatrizing in very few weeks.

Several patients reported in the last "Analysis" have been under our care still during the past year. Mary R., aged twenty-four, who was alluded to as having syphilitic bursitis of the right knee, developed the same lesion subsequently in the bursa over the olecranon process of the right arm, and later she was the subject of very deep gummy tumors on the same right knee, which ulcerated, and finally large masses of tissue sloughed and came away, leaving a cicatrice adherent to the fibrous tissues of the joint. It would be impossible to say if the disease had involved the bursa in the slough—motion of the limb is not impaired. When the sloughing was at its worst, there was some constitutional disturbance, and she received quinine pretty freely, and iodoform-ointment (ʒj ad ℥j); latterly she was given an ointment of iodine and iodide of potassium, and moderate doses of iodide of potassium internally.

The young man, aged twenty-three, mentioned in last year's "Analysis," with very severe syphilis, which was affected badly by mercury, has been seen since, and has entirely recovered from immediate symptoms, but the remains of the anterior cervical adenitis are plainly visible.

An interesting instance of the natural course of syphilis when left untreated was observed in the person of a young German man, aged twenty-five.[1] He had contracted a chancre in 1868, which was treated locally and disappeared, and the few syphilitic symptoms which had occurred since had also disappeared, and *he had never received any medication for his syphilis.* He came for the treatment of a very extensive tubercular ulceration involving two-thirds, at least, of the right lower leg; there was also some disease of the same character on the right side of the head. The ulcerative disease had begun on the leg two years previously—that is, six years after the primary sore, and had progressed steadily in spite of continuous local treatment. The disease had begun on the head six months previously; latterly, for some time, he was in attendance at the Homœopathic Medical College. The case made very rapid progress, and in two months almost the entire surface was cicatrized, the ulcerations on the head healing in about a month. The treatment was by means of the commonly-employed mixture of bichloride of mercury and iodide of potassium; locally only a little carbolic acid was employed to correct the terribly offensive odor which completely filled the room at the first visit.

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[1] *Archives of Dermatology*, October, 1876, p. 27.

A not inconsiderable number of cases of undiagnosed and consequently untreated syphilis of long duration appear at this clinic during the year, and the following is another striking instance where the true nature of the lesion was even more apparent than in the former case:

Ann M., a healthy-looking woman of twenty-nine years, exhibited a most perfectly characteristic syphiloderm of the right palm, which had existed there three years continuously, and for which she had twice been in a hospital in this city—once for a period of six months, and once for three months; on both occasions, as also during its entire existence, it had been treated locally, and with never more than a slight and temporary relief to some of the more distressing features, especially the cracking, which, when she first came under observation, quite disabled her.

The eruption possessed all the features of the palmar syphiloderm, which need not be here detailed, and on close inquiry the following history, in brief, was obtained: Ten years ago, or three months after marriage, she had a sore-throat lasting all the winter, and loss of hair, and has since been troubled much with occipital headache, worse in the afternoon and at night. Soon after marriage she had a miscarriage at two months; a second one followed at three months, and a third one at five months; she then had a child dead, born at full term; next came a child which lived two months, and after that another which lived six weeks; she then ceased bearing. The children that reached full term all had eruptions, especially on the palms and soles. Her husband had acknowledged having syphilis; he died three or four years ago.

This narrative is given as showing the natural history of syphilis, and rarely do we find its recognized course in regard to miscarriages and diseased children so perfectly exhibited as was shown in the results of the six impregnations in this case. Amazement must strike every one that the true nature of the eruption on the palm was not discovered before, especially during her sojourn twice in a hospital for periods of six and three months respectively. Recovery was remarkably speedy under mixed treatment, although she was obliged constantly to do household work, including washing of clothes; in a month it was noted that normal skin had returned to a considerable portion of the palm, and at the expiration of two months only isolated tubercles remained at the margin. She received no local treatment for the first month; then she was given diluted citrine-ointment, and latterly the unguentum hydrargyrum, to be well rubbed into the palm.

It will be noticed that the palmar syphiloderm commenced seven years after the primary lesions in this case, and had existed three years, the date of her first visit being nearly ten years from the first constitutional symptoms of syphilis; the lesion in that case, as the late tertiary lesions so generally are, was unilateral. There has been attending at the same time another woman, who exhibited so perfectly the early form of palmar lesion of syphilis that mention of the case may be interesting in connection with the preceding.

Jane H., aged forty-three, gives a clear history of syphilis contracted from her husband, having had the primary sore about March, 1875. This was followed by constitutional symptoms, including a general papular eruption, and the palmar lesion commenced about ten months previous to her undergoing treatment at my hands, that is about a year after the infecting sore. The disease occupied both palms quite symmetrically, corresponding to the mode of arrangement of the earlier skin-lesions of syphilis, and presented few difficulties of diagnosis with the exercise of proper care. The patient has been somewhat irregular in attendance, because after the first few weeks the disease had so far disappeared under antisyphilitic treatment as to cause her but little inconvenience, and she was much occupied with family cares, she having a number of children. In this instance there was none of the history of miscarriages and diseased children, thus affording additional testimony of the correctness of our chronology of this double form of syphiloderma of the palms, and that the inoculation was of recent date, since the birth of all her children, who are healthy.

A very interesting lesion of syphilis occurred in the person of a young man aged twenty-one, who exhibited a complete facial paralysis of the right side, with very considerable bony enlargement of the same side of the face. There was a tubercular ulceration on the upper lip, also on the right side of the scalp, and the history was confirmative of syphilis. Very rapid progress was made at first under specific treatment, the ulcerations healing very soon; the bone-lesion and nerve-disturbances have yielded much more slowly. He first came under treatment early in April; at the close of the year there was still some facial paralysis exhibited on whistling, elevating the eyebrows, etc., and still some thickening of the malar prominence could be made out.

The diagnosis of all the cases of syphilis has not always been a very easy matter. In one widow of thirty-eight years[1] a tubercular, non-ulcerating syphiloderma of the face so resembled lupus, and the history so confirmed the appearances, that the diagnosis was held in suspense for some time. The eruption, which improved for a while under iodide of potassium alone, yielded quickly when a trifle of mercury was added. I have, when speaking of eczema, mentioned the eruption on the flexor surface of the left wrist of a waiter-man aged thirty-six, which very closely resembled eczema, and for the moment was diagnosed as such to the class present. In the case of a woman, Bridget H., aged twenty-six, lupus erythematosus so simulated syphilis that I gave the patient the benefit of the doubt, and treated her for the latter disease for several months;

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[1] *Archives of Dermatology*, April, 1876, p. 220.

but the improvement was only very moderate, and the further progress of the case showed it to be one unmistakably of erythematous lupus.

During the past year I have made much more frequent use of mercurial inunctions in syphilis than formerly, partly for economy, and am thoroughly satisfied that the mineral often acts thus far better than when given by the mouth, and have consequently been led to employ the same more in private practice. Its well-known advantages in certain forms of syphilis, as in infants and in iritis, should be constantly borne in mind. I have also used the bicyanide in solution by the mouth, but am not prepared yet to report on the results. In one infant aged thirteen months, whose mother had chancre of the breast, the child's strength seemed to be failing under mercurial inunctions, and the mother was directed to give it thrice daily eight or ten drops of her own mixture, containing bichloride, iodide of potassium, iron, nux-vomica, and bark; and the results were most gratifying, the appetite returned, and the eruption continued to fade most satisfactorily.

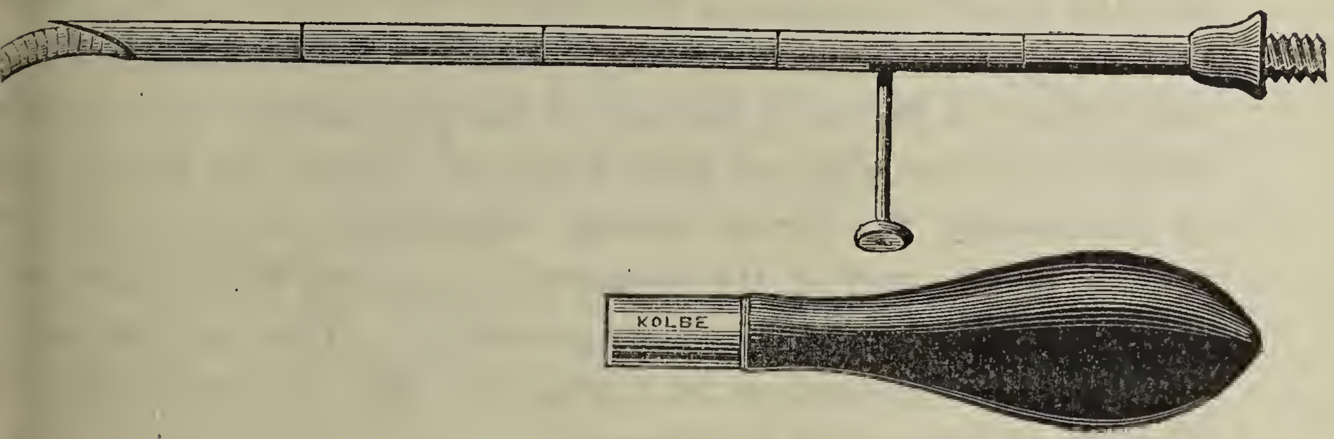
(*To be concluded.*)

Art. III.—*Paracentesis of the Pericardium, with Description of an Aspirating Trocar for performing the Operation.* By John B. Roberts, M. D., Resident Surgeon of the Pennsylvania Hospital, Philadelphia.

In the article on tapping the pericardium, published in this Journal for December, 1876, when discussing the possibility of the serous effusion becoming purulent, I stated that, even if such a result did occur, there could be no objection to treating it exactly like a chronic pleuritis, by repeated tapping, or by the introduction of a drainage-tube. Since writing the article mentioned I have, curiously enough, found a case reported in the *Monthly Abstract of Medical Sciences* for November, 1875, which proves the feasibility of such a method of treatment.

A child, aged five and a half years, was seen by M. Villeneuve with symptoms of large pericardial effusion, as evinced by cyanosis, stupor, frequent pulse, bulging of præcordial region, and œdema, with absence of heart and lung sounds. As the little patient was moribund, the aspirator was introduced, and a large quantity of clear serum withdrawn; when the instrument was removed, quite a jet of fluid spurted from the puncture. The child immediately began to improve, but the fluid continued to flow from the wound, and in the course of a few days became purulent. The return to health continued without much interruption, but the pericardial fistula remained open for over five months, and then closed spontaneously.

As regards the best form of instrument for tapping the pericardium, it was stated in the same paper that there should be some method of sheathing the point as soon as it was found that the pericardial sac had been entered, and Fitch's dome-shaped trocar was suggested as giving a valuable principle if the instrument could be made small enough and could be applied to the aspirator. I have recently had made, by Messrs. Kolbe, an instrument which seems to combine all the advantages required in an aspirating trocar for tapping the pericardium.



It consists of a small, needle-pointed cylinder, five inches long and an eighth of an inch in diameter, firmly screwed into a handle; within it slides, on Fitch's principle, a canula attached to the air-pump. The canula at the end is made flexible by a spiral, and, when it is thrust out beyond the end of the needle, curves downward three-quarters of an inch; when it is pulled backward the end becomes straight and is entirely concealed within the outer puncturing-needle. The extremity of the canula is pierced with a hole, and there are also two other fenestræ just above to give exit to the fluid. The method of using the instrument is as follows: The canula is drawn back until its flexible end is hidden within the needle, and then the hose from the aspirator is attached to a small tube fixed at a right angle to the posterior extremity of the canula. The outer needle, which only acts as a puncturing instrument, is then thrust into the integument, and immediately the operator causes the vacuum to exert suction through the internal canula. Consequently, as soon as the needle enters the cavity of the pericardium, the serum flows through the end of the canula into the receiver, and informs the surgeon that he has pierced the wall of the sac. He immediately withdraws the needle a little and thrusts the internal flexible canula into the pericardial cavity; by this manœuvre the point of the trocar is shielded, and there hangs in the sac a blunt flexible tube, against which the heart can strike with entire impunity.

The advantages of this aspirating trocar are, that by having the vacuum attached the surgeon knows when he has entered the pericardium; there is no sharp point or edge against which the heart can become wounded, hence the instrument need not be withdrawn when the distention becomes lessened and the heart's impulse is felt against the canula; the curved extremity of the canula allows suction to be exerted to a certain extent at the very bottom of the pericardial sac. If the canula becomes plugged with flakes of lymph, the handle can be unscrewed, the inner canula withdrawn, and the hose attached to the end of the penetrating needle, which then acts as a large ordinary aspirating-needle. The instrument is marked on the surface in inches, so that it can be seen at what depth the point is situated.

Aspirating the pericardium with such an instrument surely cannot be attended with much risk.

Clinical Records from Private and Hospital Practice.

I.—*A Pharyngeal Neurosis due to Uterine Disease.* By EDGAR HOLDEN, M. D., of Newark, N. J.

THE multitude of sensory or motor phenomena which modern neuro-pathology has delighted in referring to reflex or inhibitory action have in so many instances been relegated to the region of the mysterious, or fallen upon newer theories, that to ascribe an affection which may seem obscure to simple reflex irritation subjects the observer to suspicion of misconception or ignorance.

The following cases, however, whatever may be the *rationale* of the connection, are yet so undoubtedly connected as cause and effect as to justify the belief in their sympathetic and truly reflex character. (The cases are copied from notes.) If we call to mind the familiar instances of the irritative cough of early pregnancy, or that at times arising from a displaced uterus—the dyspnœa from a similar cause, or from hæmorrhoidal congestion—of coronal headache and conjunctival irritation from various uterine disturbances, the phenomena will the more readily appear to justify the diagnosis. A few cases only will be given, selected at random. The first in which uterine difficulty seemed responsible for the pharyngeal irritation was that of Miss C., aged thirty-two, who came under observation in September, 1867. Intense aching pain apparently just behind and the whole length of the posterior pillars of the pharynx was complained of, and of so annoying a character at times as to prevent sleep. There was no redness, nor indeed any visible disease. The pain was but little aggravated by swallowing, and had been occasionally better for days together—rarely ever lancinating, or other than a slow, torturing ache—if worse at one time than another, possibly when fatigued; was inclined to think worse toward night, but was not positive. She had been formerly a patient of Dr. Green, of New York, and always obtained relief from the application of nitrate of silver, the strength of which she did not know; had never heard him state his opinion of the difficulty, or give it a name; said that four or five applications were required at intervals of three days; could not say whether the pharynx was red or inflamed on these occasions. This patient was treated when first under my care in the manner common at that time, viz., with the local application of a solution of nitrate of silver; successfully, it appears, although in the December following a return of the difficulty rendered a renewal of treatment necessary. After the second recovery the patient called, and with great reluctance stated that she was wearing some kind of uterine instrument introduced five years before by a physician in Vermont, and that she had suffered more from it than from her throat, but had dreaded even the mentioning of the fact to a physician. Briefly to cover this part of the case, I would say that I removed an ordinary martingale ring which I have before me in writing, and which measures in its outer diameter *two and one-quarter inches*, eroded in places, and so imbedded in the tissues as to be removed with great difficulty. She stated the fact, which then made no impression, however, that when the aching in the loins and back was at its height, the throat was well. Considerable ulceration of the cervix was found of a superficial character, which must have readily healed, as no notes appear of treatment for several months. The patient could not remember what symptoms she experienced before the ring was inserted, but was told that she had "falling." So far as remembered, the pain in the throat and the uterine derangement began at about the same time.

Since the period above described (1867), this patient has been under observation, and as she assures me has been under the care of no other physician.

From one to three times yearly the pharyngeal pain has returned, and on one or two occasions it has been accompanied or followed by subacute pharyngitis, and once by considerable dyspnœa, but most frequently without a single visible evidence of congestion, inflammation, infiltration, or follicular disease. The affection was often intractable, and never until within two years suspected to be dependent upon any uterine difficulty. Other cases, some of which are given below, called up the circumstances of the early treatment, and the discovery resulted that in every instance, except when inflammatory difficulty had arisen from exposure and ordinary colds, uterine derangements coexisted. This was frequently a displacement, from too protracted use of the sewing-machine, or profuse leucorrhœa, from a like cause; sometimes an irregularity of menstruation, with ovarian pain; and within the past two years (since examinations have been made for the purpose) erosions of the cervix uteri have been found. No local application to the pharynx has been made since this discovery, and relief speedily follows removal of the uterine difficulty.

Case II.—Mrs. H., aged twenty-four, married about three years, presented herself for two or three consecutive days at intervals of several weeks, complaining of severe sore-throat, extending up and down the sides, as she expressed it, and of a peculiar smarting character.

On the first two occasions, there being a slight increase of secretion on the posterior pharyngeal wall, the difficulty was treated as one of subacute pharyngitis, and with some relief to the pain. The patient on the third relapse, however, stated that she could relieve the pain herself, by simply touching the uvula with the finger; and there being on this occasion absolutely no morbid appearance of any kind, a thirty-grain solution of chloride of zinc was applied to the uvula, only to verify or disprove the statement. The relief was immediate and prolonged, and on several returns of the difficulty the application was repeated, until it became evident that the trouble was not at the seat of, or in the vicinity of, the pain. Rhinoscopic and laryngeal examination gave no clew, and careful questioning failed to detect derangement of any organ. The lady was robust, of healthy family, ruddy in complexion, and assured me never ill in bed in her life. In the absence of any symptom pointing to the cause of the frequently-recurring difficulty, and after the use of quinine as a nerve-tonic with partial success, it transpired that dysmenorrhœa had been for several months steadily growing more serious, and a vaginal examination was solicited by the husband for its relief. The throat-difficulty still existed, but treatment had been abandoned. Upon examination of the os and cervix uteri, extensive erosion with cervicitis was found; even the most careful sponging of the surface produced severe lumbar pains and nausea.

Without suspecting the possible connection between the two difficulties of uterus and pharynx, the erosion and inflammation were successfully treated, and on the occasion of a subsequent visit the lady made the diagnosis in the following words: "Doctor, curing the uterine trouble has cured my throat." Nor was this merely an hypothesis: on several occasions within the past two years the pharyngeal pain has returned, and, although no marked uterine symptoms presented, some form of uterine trouble was found, treated, and the pains disappeared. If, moreover, the aching should be disregarded for a few days, redness increased; pain in swallowing, and, indeed, all the evidences of a subacute pharyngitis, supervened; never, however, passing the subacute stage, and subsiding, without relief of pain, on the third day. This never entirely disappeared until the uterine trouble was found and relieved. It might be added that while erosions of the cervix in this case have been observed the chief difficulty has been an extreme anteversion, and the longest interval of (and what now seems permanent) relief has followed the use of an anteversion pessary.

Case III.—Mrs. R., married for seven years, strong, robust, of fine complexion, and apparently well, upon being seated in the office, remarked, "I am come to show you the worst throat you ever saw," and proceeded to describe the persistent agonizing pains she had experienced for more than a year, gaining nothing from treatment, etc. Upon making careful rhinoscopic and laryngoscopic examination, and finding no sign of disease, the statement to this effect seemed to unnerve her, and she complained that she had been repeatedly told that by physicians, but she knew better, and could not suffer so much from nothing. There were no symptoms of disorder of stomach, liver, bowels, or kidneys. The urine was examined, without result. There was but one single departure from a normal condition, viz., profuse leucorrhœa following each monthly visitor. Examination and treatment proved this to be uterine in origin, and its cure dispersed completely the pharyngeal pain.

Case IV.—Mrs. S., aged forty-three, mother of six children, somewhat thin, having an anxious look, but not otherwise looking ill, presented a history almost precisely that of the preceding, except that she was given to melancholy reflection as to death from consumption. Of this disease she showed no sign, and did not remember to have had a cough. She had been treated, however, by several physicians in succession, and given up as a chronic and incurable case. There being only the pain in the pharyngeal arch, chiefly at the sides, and no evidence of disease visible as low as the bifurcation of the trachea, which could be plainly seen in the laryngeal mirror, I persuaded her with difficulty that there was no throat-trouble. Inquiry elicited the fact that the menses had become irregular, and, owing to the period of life at which she had arrived, the trouble was ascribed to purely nervous origin. Bitter tonics, with quinine and arsenic, gave great relief, but after a considerable time (eleven weeks) the actual cause of the trouble seemed to be found in a morbidly sensitive uterus, with displacement. No local treatment, however, beyond the use of vaginal douches was adopted under the circumstances, but these, with the persistence in the tonics, gradually removed both difficulties.

So many cases similar to the above have been observed that it appears singular no detailed account of them has as yet appeared in medical literature.

Further account of cases would give but a repetition of symptoms and successful treatment where the uterine trouble could be brought under control, and, although a better selection might have been made, these four cases may suffice to call attention to the subject.

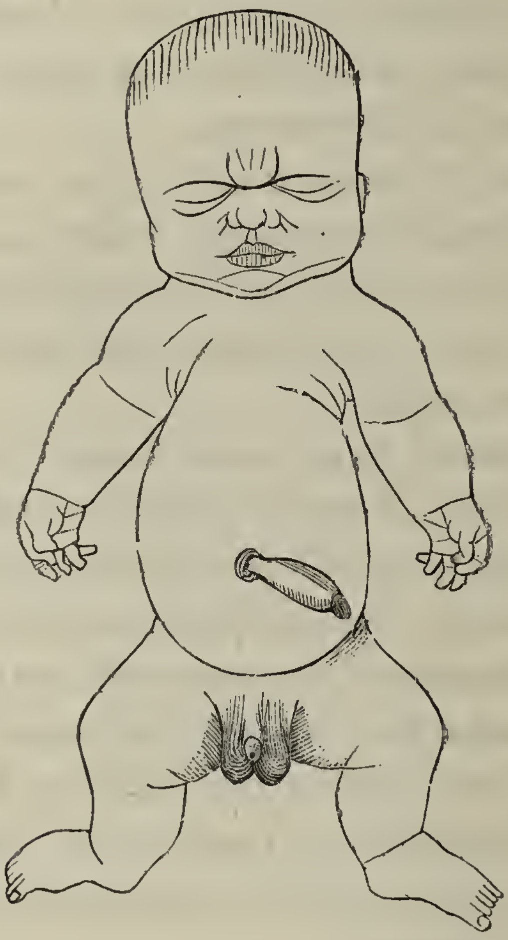
It may be suggested that some form of stomach-derangement, particularly that of acrid gastric secretion, might have given rise to the pains, as this is a common and familiar cause of pharyngeal irritation, but, aside from once entertaining this view, and finding treatment unsuccessful, no symptoms of such difficulty were present in the cases included in this category. That the trouble was simply an ordinary neuralgia seemed disproved by the character of most of the cases, and the absence of other neuralgias and the subsidence of the pain upon cure of the uterine disease.

I might with propriety add that the cases I have observed were all, with but one exception, in those well-to-do in the world, and, although ordinary hysteria was not so frequent as to be noted in any case, the pain would seem justly to deserve the term hysterical, if we use it as originally designed, viz., a neurosis connected with *ἡ ὑστέρα.*

II.—*Cases of Hypospadias.* By James S. Bailey, M. D., Albany, N. Y.

The fœtus represented in the illustration is one of unusual interest, both to the physiologist and obstetrician. It will be seen to be of more than average size and weight, also differing much in form and proportions from new-born children generally.

The history of the case is as follows: Mrs. M., aged twenty-five, the mother of three children, December 7th, at 4 A. M., was taken in labor. A midwife was employed. At 9 A. M. the bag of waters ruptured, and was followed by a number of severe pains. The midwife discovered an unusual presentation, and immediately sent for me, with a request to bring instruments. When I entered the sick-chamber, she informed me that it was a face-presentation. A digital examination confirmed her statement; the face was presenting, with the chin posterior, arrested at the superior strait. The umbilical cord was tightly drawn over the face, and was firmly compressed between the cranium and pelvic bones, thereby cutting off the fœtal circulation completely. I determined at once by



version to deliver by the feet, which was not so easily accomplished. The fœtal head was very large, and so firmly impacted that it was difficult to pass the hand beyond the sacral promontory, but when accomplished the feet were readily found and brought down. A malformation was now discovered; the limbs were so short and thick it was with difficulty that I could retain possession of them and make the necessary traction for delivery. The breadth of the fœtal hips formed an obstacle to delivery, and the shoulders also offered resistance, but, by hooking the index-finger over each arm, they were brought down; still the most difficult part remained, to deliver the head. This was accomplished, with considerable labor, in the usual way.

The child weighed, undressed, eleven pounds and three-quarters. The fœtus is malformed in every respect, having a very large head, short neck, narrow chest, large and long trunk, with clumpy and short extremities, particularly the lower limbs. The condyles of the limbs are very large, and the bones are curved and distorted. There are also supernumerary fingers. The most interesting feature is in the development of the genitals. The scrotum is very large, with the testicles descended, and where the penis should be inserted is a cleft resembling the vagina, by pressure on both sides of which a rudimentary glans penis is exposed.

Chaussier has given the following as the proportions exhibited by the different parts of the fœtus at birth, taken from a child nineteen and a half inches long, with which the corresponding measurements of this malformation, the length of which is nineteen inches, are contrasted:

		Malformation.
	Inches.	Inches.
From the top of the head to the pubes	12¼	14
From the pubes to the feet	7¼	5½
From the clavicle to the bottom of sternum	2	2½
From the clavicle to the pubes	6¼	8

The transverse measurements were as follows:

	Inches.	Inches.
From the top of one shoulder to the other	4¾	6
From the sternum to the spine	3¾	3
From ileum to ileum	3	2½

FŒTAL HEAD.

Longitudinal Diameters.

	Inches.	Malformation. Inches.
Occipito-mental	5¼	6
Occipito-frontal	4½	6
Sub-occipito-bregmatic	3¾	4½

Transverse Diameters.

	Inches.	Inches.
Bi-parietal	3½ to 3¾	4½
Bi-temporal	3	3⅜

Vertical Diameters.

	Inches.	Inches.
Tracheto-bregmatic	3½ to 3¾	4
Fronto-mental	3	3⅜

I can refer to other cases of hypospadia which have come under my observation. A family of girls attended school near my residence, and one of them especially attracted my attention. She was a tall and sad-looking creature, with rather a pretty face, and had nearly arrived at the age of puberty. She was bright and studious, and had been instructed in the female accomplishments, performed on several musical instruments, embroidered nicely, and was said to be an excellent housekeeper; but she would often quit the routine of household duties, take her brother's gun or fishing-tackle, and steal away to enjoy the bent of her tastes. At the age of puberty her voice changed, and the beard began to grow. It was finally whispered that Martha was an hermaphrodite. A brother had recently graduated in medicine, and returned home. Her situation was known to him, which he now sought to relieve. After consulting the best legal authorities, Martha was sent away for transformation. She went to a neighboring State, where she donned the male attire, and, with hair cut short, returned home as John T. As a matter of course, this created a little gossip, but, owing to the high social position the family sustained, little was said, and John was treated with as much respect as his brothers. In after-life an attachment sprang up between himself and a neighboring girl, who had been much admired and courted without success by other young men. Consent was asked of her parents, and after due consideration given they were married. They have lived together apparently happy for many years, but without issue. When the mother gave birth to this child a dissipated physician officiated, and when his attention was directed to the malformation he severed the penis with scissors, thinking it was a female malformed.

I have met with another case, in this city. The subject is a stout man. When erection occurs his penis describes a half circle, looking downward. The urethra opens just in front of the scrotum, on the under side. He is married, and enjoys the marital rites acutely, although his wife confesses that she does not experience the same gratification. Intercourse never incurs a risk of conception in this case, for the semen is discharged outside of the vagina.

They have one bright little girl, however, which resembles the father, the conception of which, the wife tells me, was brought about by introducing the escaped semen into the vagina, which illustrates the old saying, "Where there is a will there is a way."

III.—*Rupture of a Multilocular Ovarian Tumor from Violent Vomiting; Recovery.* By S. A. Raborg, M. D.

Mrs. L., native of Ireland, aged thirty-three; has had two children and one miscarriage prior to this pregnancy. Called suddenly at 4 A. M., Tuesday, January 14, 1868, to patient in her third labor. The membranes had ruptured without apparent pain, and the amniótic fluid was rapidly escaping. Ordered her to remain in a recumbent position.

This condition continued the same until the next day (Wednesday), at 8 P. M., when regular uterine contractions commenced, and in an hour and a half she gave birth, without unusual trouble, to a fine male child weighing about eight pounds. Her condition remained good until the fourth day after her confinement, when her nurse opened a window near her bed, to air the room. From this exposure she had a violent rigor, followed by some uterine inflammation. With proper treatment and care she gradually recovered, but slight tenderness and swelling remained over location of left ovary. For six weeks she continued under my care, and counter-irritation and other means were used to relieve this condition, with apparent success.

For some months I saw nothing of the lady, when in the September following she came to my office and stated that she "could feel a swelling in her left side, which she thought was growing constantly larger." From the history of the patient, I feared the formation of an ovarian cyst, and upon examination found a round, hard tumor on the left of median line in the lower part of abdomen. It was easily displaced, and was evidently not connected with the uterus. I pronounced it an ovarian tumor, and sent her to Prof. Peaslee, who confirmed the diagnosis.

At 8 P. M., Sunday, October 11th, I was called in great haste to see Mrs. L. About 2 P. M. she had taken dinner, and, as she felt better than usual, she had eaten very heartily. Immediately after this she started with her husband in an open carriage for a ride to High Bridge. When she arrived at about Seventy-third Street, in the park, the jolting and motion of the carriage caused nausea, and she soon vomited "with great violence." After this she seemed relieved, and told her husband to continue toward High Bridge. As she rode farther she, however, grew weaker, and felt more and more as if she would lose her consciousness. By the time she reached the hotel, her husband said he was afraid she was dying. He immediately returned to the city with her, and sent for me. I found her in a condition of perfect collapse, her face blanched, extremities cold, breathing difficult and sighing in character, pulse a mere flutter, and every indication of immediate death from shock. She had vomited twice, and had two loose alvine discharges, since her return. I gave her brandy with ice, and other stimulants, as rapidly as I could; had her covered with sinapisms, and applied heat to her extremities. I remained with her, and sent for Dr. Peaslee to see her in consultation with me. On careful examination of the abdomen I concluded the tumor had been ruptured from the force of the vomiting, because the abdominal cavity seemed equally distended at all points, and resembled a case of ascites.

By pressing one hand below the xiphoid cartilage, and palpating with the other in the lower part of the abdomen, a distinct fluctuation of the fluid could now be felt, while a careful examination of the patient a few days before failed to show any signs of abdominal dropsy. Dr. Peaslee came by half-past nine o'clock and coincided with me as to the rupture; he "hoped the tumor was not of the multilocular variety, as he had never seen a case of that form of rupture without death ensuing within four or five days." This is readily accounted for, as the fluid of the single sac is so much milder in character, and consequently so much less apt to produce violent peritoneal inflammation. He indorsed the treatment, except to advise that gin be substituted for the brandy we were giving her, on account of the diuretic effect the former would produce.

12 P. M.—Mrs. L. evidently reacting; pulse 100; extremities warm; has had no disposition to vomit for three hours.

Monday, 10 A. M.—Condition better; pulse 90; temperature of body normal.

5 P. M.—Dr. Peaslee met me again in consultation, patient doing well.

From this time she continued slowly toward recovery; for several days her kidneys acted freely, and once or twice every twenty-four hours she had a large, watery discharge from the bowels.

After she was able to again resume her household duties, she passed from under my supervision, and was examined by several physicians. In Feburary, four months after the last attention I rendered her, she was treated by Dr. Thomas C. Finnell. He performed paracentesis in that month, and speaks of her condition as follows: "When I tapped her I was in doubt, from the uniform appearance of the abdomen, whether it was ascites or ovarian tumor, although she came with the history of the latter. I drew off about four quarts of a clear, straw-colored fluid, and then could readily detect the hard, irregular tumor in the left side of abdomen."

This operation of Dr. Finnell's gave her temporary ease, but the peritoneal cavity soon refilled, and on September 28, 1869, she entered the State Woman's Hospital, and came under the supervision of Dr. Thomas Addis Emmet.

The following are the notes of her case, during the time she was under the care of Dr. Emmet:

"*Ovarian Tumor.*—Mrs. E. L., aged thirty-three; Ireland—admitted September 28, 1869; discharged cured November 29, 1869. Married, and has had three children, and one miscarriage. Last child born twenty months ago. First began to menstruate at twelve. Has always been regular in time and quantity until last summer; since then has been irregular, and the quantity has been excessive. For nine weeks during the hot weather was not free from a show, and, since her last period, has had nearly all the time more or less blood-discharge. She has no pain attending her catamenia, with the exception of a disagreeable feeling in the left inguinal region. During her last pregnancy she never observed that anything was wrong with her. After the birth of her child, she had a great deal of pain in the hypogastrium, and was not able to leave her bed for six weeks. Eight months subsequent to her confinement, her physician discovered the presence of a tumor growing from the left side, which he pronounced ovarian. This continued to increase quite rapidly in size. A year ago, while riding out in a carriage, she was seized with symptoms which denoted failure of the powers of life: nausea, vomiting, and excessive exhaustion. The physicians attending her were of the opinion that the sac had been ruptured by the force of the vomiting. She was tapped once in Feburary, 1869. Bowels regular, appetite quite good. Complains of pain in left side and in both hips.

"*October 25th.*—Pulse 80, respiration 24; urine amber-colored, sp. gr. 1.025. Reaction slightly acid, no albumen, no sugar, no phosphates. Microscopic examination gives negative results. The following measurements were taken:

Girth of body at umbilicus	37½	inches.
From ensiform cartilage to umbilicus	8	"
" Umbilicus to symphysis pubis	9	"
" Right ant. sup. spin. process to umbilicus	10	"
" Left " " "	9	"
" Axillary temperature	98½°	Fahr.

"*Operation, October* 25*th.*—Present, Drs. Sims, Peaslee, G. T. Elliot, Jr., Peters, Bigelow, of Georgia, Mott, Raborg, and house-staff (Harrison, Emmet, Page), and others. At 2.30 P. M., the patient having been etherized by Dr. Perry, Dr. Emmet commenced the operation, assisted by Drs. Sims, Peaslee, and house-staff. An incision was made, extending from the umbilicus to the symphysis pubis. The abdominal walls were very thin, and a considerable quantity of fluid was found in the abdominal cavity. After this was evacuated, Dr. Emmet, by means of Simpson's sound, ascertained that there were no adhesions to the peritonæum, and but one to the omentum. The Wells trocar was then plunged into the cyst, but no fluid escaped until the breaking up of the inclosed mass. Then a dark, grumous-looking fluid was withdrawn; several cysts successively punctured, and contents evacuated. The material in each was found to differ in color, density, etc. The pedicle was secured by means of a silver suture passed as a shoemaker's stitch according to the method recommended by Dr. Emmet, and returned into the abdominal cavity. There was some oozing from the pedicle and adjacent parts. Liq. ferri persulph. used; abdominal wound closed with silver sutures.

"4.15 P. M.—After operation, pulse 148; much nausea and some vomiting, caused by the ether. 11 P. M.—Pulse 116. Patient has reacted quite well. Midnight—pulse 120. She is taking two teaspoonfuls of beef-essence every hour.

"*October* 30*th.*—Patient has been doing finely; nothing special of note. Four sutures removed to-day by Dr. Emmet.

"*November* 2*d.*—Remaining sutures removed.

"23*d.*—Patient has improved slowly.

"29*th.*—Discharged cured."

A point of interest in connection with this operation was, that, when the pedicle had been secured by Dr. Emmet, he examined the condition of the other ovary, and remarked that it looked pale and unhealthy, and hesitated as to the propriety of removing it; but, after some consideration, allowed it to remain. Mrs. L. continued in good health after she left the hospital, and since that time has given birth to three children, the first of whom was born just about two years after the removal of the tumor.

The special interest in this case is, in the first place, that a multilocular tumor should rupture, emptying the contents of one of its cells into the peritoneal cavity, and the patient survive the shock and consequent inflammation; secondly, that from the history of the case there is little doubt that this rupture never healed, and the secretion from the sac continued to flow into the peritoneal cavity up to the time of the operation, or for more than a year. The original well-marked tumor without dropsical effusion around it; the condition as witnessed by Prof. Peaslee and myself after the rupture; the distinctly-marked tumor again after Nature has disposed, by diuresis and other means, of a large portion of the fluid, six weeks later, showing it was not ascitic; then the description given by Dr. Finnell of the appearance of the abdomen when he tapped it; and, finally, the fact that a large quantity of fluid was found by Dr. Emmet when he performed ovariotomy —all go toward proving this assertion to be correct.

The only way this could have been conclusively settled was, to examine the tumor after its extraction, but the contents of the other cells were so gelatinous that the operating surgeon was obliged to cut and tear the tumor so much to reduce its size before extraction that, when it was placed on the table, nothing definite could be determined.

Spencer Wells, at page 244 of his work on "Diseases of the Ovaries," relates a case of spontaneous rupture of a multilocular tumor in an unmarried woman, forty-six years of age. He says: "Tapping was agreed upon, and on April 29th, assisted by Mr. Phillips, I tapped two inches below the umbilicus. Nothing would pass through the canula, but we pressed a pint of very viscid matter from the puncture. This was followed by feeble, rapid pulse, vomiting, restlessness, and tenderness—all indicative of a low form of peritonitis; and ovariotomy was performed on May 3d, though with little more than a slender hope of saving life. Directly the peritonæum was opened, it was found to be filled with a tenacious mass, like calf's-foot jelly, which had escaped from a long rupture in the posterior part of a large ovarian tumor. Nineteen pounds of the matter were collected, and the tumor weighed six pounds. She died forty-four hours after the operation."

Prof. Peaslee, in his work on "Ovarian Tumors," at page 75, speaks of these cases as follows:

"I have seen five cases of spontaneous rupture of polycysts, and four of the patients died of peritonitis within five days of the accident. The remaining one barely recovered, and the tumor was successfully removed by ovariotomy, about a year afterward, by Dr. T. A. Emmet, of the New York State Woman's Hospital." The case of Mrs. L., the history of which is here given, is the one referred to by Dr. Peaslee in this extract as "barely recovering." It was her good fortune that the ruptured cell contained a fluid more of the character of that generally found in the tumors which Dr. Peaslee treats of as "oligocysts."

No. 36 West Fiftieth Street, New York, *February* 6, 1877.

Notes of Hospital Practice.

BELLEVUE HOSPITAL.

Treatment of Aneurism by Modified Compression.—A form of treatment of aneurism by compression has been recently practised, which, although not new, deserves notice from the beneficial results which followed its use. The principle of it is to suspend a shot-bag by rubber in such a manner that pressure will be caused on the aneurism in the following way: A bag containing eight or ten pounds of shot is suspended from a support by means of rubber tubing, in such a manner that for four or five days the pulsation of the artery is sufficient to raise the weight. At the end of that time the bag is lowered so that it completely occludes the vessel. It has been found that in two cases in which the method was used complete consolidation took place in ten days. An interesting fact noticed was that only slight pain was complained of during the time that the weight was in position. The bag is rendered steady by a rod of wood which is buried in the shot and extends upward, and plays through metallic ferules in such a manner that motion can only take place in a vertical direction. The bag is still further kept in position by a strip of bandage which is attached to it on either side, and passes around the circumference of the limb.

Extirpation of the Rectum.—A case of malignant disease of the rectum has recently been treated in Dr. James R. Wood's service by extirpation. The patient was a woman, aged thirty-four. The first symptoms of the disease occurred eighteen months ago, when she noticed that defecation was accompanied by pain and slight hæmorrhage. On admission to hospital a hard mass was discovered, which embraced the sphincter ani, and extended up the rectum for an inch and a half. It was decided to remove the mass, and for this purpose a circular incision was made around the anus and beyond the growth, and then by means of the scissors the tumor was enucleated. After this was done, the rectum was drawn down without difficulty, and fastened by means of sutures to the skin at the anus. Very slight hæmorrhage followed the operation.

CHARITY HOSPITAL.

Puerperal Fever.—Six cases of puerperal fever occurred during the month of January in the obstetrical service. The patients were immediately transferred to the pavilions, and the disease ceased. It would seem, from the experience of Bellevue and other large hospitals where a lying-in service has been conducted, that it would be unwise to risk puerperal cases in any part of a general hospital, no matter how perfectly the police arrangements were carried out. The puerperal-fever cases were of interest pathologically from the fact that some of them developed an inflammation of the urinary tract which has been referred to in Dr. Chamberlain's paper read before the County Medical Society at its last meeting.

Aneurism of the Abdominal Aorta.—A patient entered hospital complaining of severe pain located over the ensiform cartilage. He said, moreover, that he was very liable to vomit after eating. On examination an aneurismal *bruit* was made out, which was most distinct at the point of pain. The patient had also a mitral murmur, from which it was differentiated by being loudest over the ensiform cartilage. A few days afterward the patient died suddenly, and at the *post-mortem* examination an aneurism was discovered over the cœliac axis. The case was of interest in proving that it is absolutely impossible to make a certain diagnosis between cancer of the stomach and aneurism of the adjacent aorta, for in the above case there were both pain and vomiting. At the time the diagnosis was made the impossibility of separating the two conditions was appreciated.

MOUNT SINAI HOSPITAL.

Compound Fracture of the Tibia; Difficulty of Diagnosis.—A man while repairing a railway-car received an injury of the leg, which he did not consider to be of any grave import. Four days afterward he entered the hospital, and on examination a scab was found over the middle third of the tibia. This scab was not removed, inasmuch as it was feared that it might possibly lead to a fracture of the tibia. No crepitus could be made out, and the general appearances indicated periostitis. Ten days after admission the scab came away, and with it a necrosed portion of connective tissue. It was then found that there was a compound fracture of the tibia. A point of interest in regard to the wound was that a diphtheritic patch formed over the granulating surface, and returned after removal. The further treatment consisted in placing the limb in a plaster-of-Paris dressing.

Pott's Disease.—The case of caries of the spine, reported in the March number of the Journal, died from exhaustion, and at the autopsy the cord was found to have passed into a condition of atrophy for about three inches in the dorsal portion. The vertebræ from the second dorsal to the first lumbar had become completely disorganized, so that the spinal column became turned on itself like the letter C. There was no sign of pressure at a single point, as had been suspected from the history of the case. It may have been, however, that such an accident did take place when the patient was a child, and with the disintegration of the vertebra that condition was not maintained.

Pneumo-Thorax; Dislocation of the Ribs.—Some months ago a case was recorded in which pneumo-thorax was treated by making an opening into the chest and washing it out. The improvement then noticed has continued, but with the resulting contraction of that side of the chest the sternal ends of the fifth and sixth ribs have become dislocated so as to project up and cause considerable pain. It is interesting to estimate what will be the ultimate effect of the contraction if the patient lives.

Traumatic Pleurisy, without Fracture of Ribs.—A woman aged thirty-five, and of good health and constitution, fell a distance of fourteen steps and struck on her right side. Following this there was severe pain, and on admission pleurisy on that side was made out. Shortly after entering she was taken with a rigor, and it was found that the pleurisy had passed into pleuro-pneumonia. The patient did well, however, and at the present time has passed the crisis.

Double Hydrocele; Failure of the Operation for Radical Cure.—A man aged twenty-eight entered hospital suffering from double hydrocele. He was a native of Heidelberg, and while living there had the operation for the radical cure performed; and on admission showed a long cicatrix on the scrotum, where the incision had been made. The operation was performed in 1870, and at the present time the condition is as bad as it was before the operation.

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 28, 1877.

DR. E. G. JANEWAY, President.

Malignant Disease of the Thyroid, involving the Trachea.—Dr. JOHN H. RIPLEY presented a specimen of sarcoma which had come under his observation at St. Francis's Hospital. The history of the case was as follows: A married woman, aged fifty-four, entered hospital February 26th, in a cyanotic condition, and suffering from orthopnœa. She said that five weeks previously she noticed a tumor in the median line of the neck, which increased steadily. The facts obtained from the patient were few and unsatisfactory. A tumor existed slightly to the left of the median line, which hung down over the sternum, and as dullness was found to extend for an inch and a half below the upper border of the sternum, the supposition was that the growth passed into the mediastinum. In order to relieve the breathing, an incision was made in the median line down to the trachea; but inasmuch as the difficulty of breathing did not seem to be in the larynx or upper part of the trachea, tracheotomy was not performed. The finger was carried down into the mediastinum, and found to encounter the tumor. After the incision was made into the mass the respiration slightly improved, but on the following morning dyspnœa again returned, and the patient sank, and died during the afternoon. At the autopsy the tumor was found to extend down into the mediastinum as far as the bifurcation of the trachea. It inclosed the trachea and larynx, and pressed upon the œsophagus, preventing deglutition. The tumor seemed to be of a sarcomatous nature, and involved a portion of the thyroid. Another tumor, of much smaller size, and pediculated, was found an inch and a half to the left. The inguinal and axillary glands were enlarged, and a small tumor was found in the cellular tissue of the inguinal region. Dr. Ripley said that the tumor decreased to about half its size on the morning following the operation.

Foramen Ovale measuring Two Inches by One and Three-fourths Inch.—Dr. Austin Flint presented to the Society on behalf of Dr. Ford, of Ann Arbor College, a heart with a foramen ovale measuring two inches in one diameter, by one and three-fourths in another. The specimen was obtained from the dissecting-room; but, from an examination of the cadaver, there seemed to be no deficiency in nutrition. There was no obstruction of the pulmonic orifice, and no obstruction of the auricle. The right side of the heart was enlarged.

Dr. Flint presented a specimen of deer's heart, which he also obtained from Dr. Ford. The heart showed a cicatrix where some shot had entered that viscus.

Fibrinous Bronchitis.—Dr. BEVERLY ROBINSON presented a specimen of fibrinous cast of the bronchi which he had received from Dr. Brown, of Syracuse. The specimen was obtained from a child aged ten, who was suffering from bronchitis, and who expectorated casts every few days.

Dr. BRIDDON said that, during the war, he was asked to see an army-officer who was suffering from urgent dyspnœa, and upon whom it was proposed to perform the operation of tracheotomy. Previous to the attack of dyspnœa the patient had coughed up a cast of the bronchi measuring four or five inches in length, and presenting the appearance of the trunk and roots of a tree. The operation was performed, but the dyspnœa was not relieved, as was prognosticated.

Dr. AUSTIN FLINT had seen several cases of fibrinous bronchitis, including one which was brought under his notice by Dr. Stephen Rogers. One case of cast which he had observed was not properly due to fibrinous bronchitis, but to the coagulation of blood in the bronchi.

Dr. JANEWAY had under his observation a patient with chronic bronchitis, who, after an attack of hæmoptysis and dyspnœa, coughed up casts of the bronchi.

Enlarged Spleen.—Dr. E. H. M. SELL presented to the Society an enlarged spleen, which he had removed from a patient sixty-five years of age, who died of apoplexy. The patient had annual attacks of jaundice, with gastro-intestinal catarrh. There was no evidence of heart-disease, had been no intermittent fever. The patient had for ten years noticed that the abdomen in the left hypochondriac region was enlarged, and, moreover, that pain occurred over the tumor.

Heart-Murmur at the Apex caused by Tendinous Cord in the Left Ventricle; Death from Apoplexy.—Dr. E. G. JANEWAY presented a unique malformation of the heart, which was of marked interest, inasmuch as it proved that a heart-murmur might exist from mechanical cause, yet there be no valvular disease. The case was instructive, also, inasmuch as there was coma with contracted pupils, and with a hasty examination it might be taken for opium-poisoning, in which there was rapid breathing. There was found, however, right hemiplegia. An examination of the heart demonstrated the presence of a murmur heard most distinctly at the apex. At the autopsy there was discovered a tendinous cord extending across the ventricle, which, in all probability, was the cause of the murmur. There was no leakage at any of the valves. The brain showed an extravasation into the pons Varolii, which accounted for the contracted pupils.

Aneurism of the Anterior Tibial Artery.—Dr. JANEWAY presented for Dr. Stephen Smith a specimen of aneurism of the anterior tibial artery, which had been mistaken on first observation for cellulitis of the leg. The patient complained of pain in the leg, which had continued since last August. At first the patient suspected that it was rheumatism, but after a time the extremity below the knee began to swell. He was admitted to Bellevue Hospital on February 23d, and at that time the foot showed signs of gangrene, characterized by purple discoloration—blebs, and a decreased temperature. The upper part of the leg was swollen. There was no pulsation in the tibial arteries. The diagnosis at first made was that of cellulitis, but, on a more careful examination, it was suspected that there might be present a diffuse aneurism, from the reason that a *bruit* was heard, though there was neither pulsation nor fluctuation in the calf of the leg. An exploring-needle was first introduced, but without result. Subsequently, a free incision was made, when a large clot was discovered among the muscles. The leg was amputated on February 27th.

After a careful dissection, it was found that there was a fusiform aneurism of the anterior tibial artery, which had ruptured and caused extravasation of blood among the muscles of the leg. The cavity of the aneurism was about two inches in diameter, and from pressure the fibula was found to be corroded.

Stated Meeting, March 14, 1877.

DR. E. G. JANEWAY, President.

Report on Dr. Ripley's Case.—Dr. HEITZMANN reported that a microscopical examination of the case presented by Dr.

Ripley showed it to be medullary cancer of the thyroid gland.

Fibroid Tumor of the Uterus.—Dr. Mason presented several specimens of a fibroid tumor of the uterus, which were removed from a patient, with the following history: The woman was forty-eight years of age, and had been usually in fair health. For twelve years she had profuse menstruation, and within the last few years she noticed that the abdomen became very much enlarged. Recently she ran down in health, complaining of debility, nausea, and sleeplessness. Three months ago it was suspected that there was a uterine tumor, and on February 6th she came under observation. For three weeks previously she had been taking ergot, but had then ceased its use on account of the nausea which it occasioned. On February 13th she was thoroughly examined for the first time, and it was found that the uterus extended above the umbilicus, and contained a fibroid tumor. About the same time shreds of mucous membrane, with portions of the tumor, began to come away. The treatment pursued was to tear away daily as much of the tumor as could readily be done, and, as the uterus diminished to about one-half its original size, hæmorrhage ceased. After removing the fragments, the uterus was washed out with disinfectant solutions. On March 5th the last fragment came away. The patient completely recovered on March 13th. At no time did the temperature exceed 101°. The specimen presented, which was only a fragment of the original tumor, weighed fourteen ounces.

Dr. Putnam-Jacobi referred to a case of sarcoma of the uterus which reproduced itself.

Dr. Janeway said that he had recently seen at the Bellevue dead-house a case of enlarged polypus of the uterus, which rested in the vagina and was attached to the cervix. The important feature of the case was, that death occurred suddenly from rather a rare cause: the tumor resting in the vagina had caused ulceration there, and, as a result, an artery was cut across, followed by fatal hæmorrhage.

Purulent Cyst of Left Ovary; Parametric Abscess opening into the Rectum.—Dr. Putnam-Jacobi presented for a candidate a specimen of ovarian cyst with the following history:

A woman, aged forty-eight, complained during the past year of severe pelvic pain. Three months before she came under observation there was severe abdominal pain, with diarrhœa. Subsequently the pain became localized in the left iliac region, and was accompanied by constipation. The patient was seen by Dr. Sims, and a diagnosis of pelvic abscess made. When the candidate examined the patient, there was noticed marked tenderness in the left broad ligament, with fixation of the uterus. A similar result was obtained by examining the rectum. No fluctuation was discovered. The constipation was persistent, and relieved only by laxatives. A spontaneous alvine evacuation occurred on February 23d, and was repeated on the two following days. On February 26th mucus and muco-pus occurred in the discharges, and the patient lingered for ten weeks, when she died of exhaustion.

At the autopsy the peritonæum was found injected, but there was no effusion. There were no adhesions except between the mesentery and left broad ligament. The uterus was normal. The sigmoid flexure was adherent to the mass, and along its surface were numerous ulcerations, one of which opened into an abscess in the left broad ligament by an orifice an inch in diameter. A tumor was detected in the left broad ligament the size of an egg, and, on making pressure, it was found not to open into the rectum. The cyst was enveloped in a capsule, which was intact. On making a section into the cyst, it was found to contain a greenish-colored pus, different in appearance from that which passed into the rectum. The colon was ulcerated at different portions along its course, as well as the cæcum, and Peyer's patches in the small intestine.

Dr. Janeway referred to a case of ovarian tumor weighing sixty-two pounds, in which pus escaped from the tumor into the vagina. The size of the tumor was such that, on one occasion, it slipped to one side and threw the patient out of bed. Dr. Janeway mentioned a case of fibro-cystic tumor of the uterus, in which there was heard the succussion-sound. It was the first case of the kind that he had met with, though air and fluid in ovarian tumors occurred not infrequently.

The formation of gas in the uterine tumor was caused by gangrene of the walls, and resulting decomposition.

Ulcerated Endocarditis.—Dr. Robinson presented a specimen of ulcerated endocarditis. The patient was fifty years of age, and was suffering from malaria, bronchitis, and emphysema. Death took place from collapse, and was preceded by coma. The heart weighed twenty-four ounces, and was markedly hypertrophied. There was ulcerated endocarditis, which had destroyed a portion of the aortic valves. Dr. Robinson thought that the malaria which the patient suffered from might have had a causative influence.

Dr. Janeway thought that the old endoarteritis was the beginning of the more recent condition. In regard to the coma, he said that recent observers had found that in cases where coma had appeared, and where there were no gross signs of any cerebral lesions, a microscopical examination demonstrated the fact that many of the smaller arteries were plugged with emboli. In regard to the question of micrococci causing ulcerated endoarteritis, Dr. Heitzmann was of opinion that their presence or their absence could not be considered as being of very much importance.

Fracture of Tibia and Fibula; Necrosis; Amputation.—Dr. Erskine Mason presented a rare specimen of fracture of the tibia and fibula, near the ankle-joint, in which displacement of the lower fragment of the tibia took place forward, and was followed by necrosis. The history was as follows: Last June a man entered Bellevue Hospital with fracture of the bones of the leg, and said that six weeks previously he had fallen from a wagon and received the injury. The dressings which had been applied had nearly resulted in mortification, and, on examining the patient on admission, the foot was found much swollen. There was also an ulceration over the inner side of the os calcis, which led to dead bone. Several sinuses also were found on the dorsum of the foot. Some gentlemen who saw the limb were of the opinion that there was a displacement of the astragalus, from the prominence over the instep. On January 10th the patient was etherized, and a portion of dead bone removed from the os calcis. The patient did well after the operation, but within three weeks sinuses again appeared on the dorsum of the foot, accompanied by severe pain. On February 24th the leg was amputated. After dissection, the amputated portion showed that a fracture of the tibia and fibula was present. The articular surface of the tibia was broken off, and projected forward. It eventually became necrosed, and gave rise to the impression of dislocation of the astragalus. The lower fragment of the fibula also projected forward. The fracture took place about an inch and a half above the joint.

Extirpation of the Rectum for Malignant Disease; no Return of the Disease.—Dr. BRIDDON presented the rectum of a patient upon whom he had operated at the Colored Home on November 20, 1876. (The case is reported in the JOURNAL for January, 1877, page 63.) The patient did well after the operation, and eventually died of pneumonia and pleurisy. At a recent meeting of the Society, Dr. Briddon expressed the view that the disease was returning in the cicatrix, but on an examination of the specimen this opinion was found to be incorrect. There was, however, an enlarged lymphatic gland above the cicatrix. One result of the operation was stricture, and this was produced by the rectum, after the operation, retracting above the margin of the anus for an inch and a half, and the cicatricial tissue which substituted it contracting, and thus lessening the calibre of the gut.

Adenoid Tumor of the Soft Palate.—Dr. ANDREW H. SMITH presented a tumor of the soft palate, which he had removed. The history was to the effect that the patient was affected with a tumor in the soft palate, the size of an almond. The tumor was opened by means of caustics, and a glairy fluid escaped. After this the tumor healed up, but after eighteen months returned. When the case came under the observation of Dr. Smith the tumor was as described. It did not pass beyond the raphe. The operation performed consisted in making an incision over it, and then enucleating. Previous to the operation it was feared that the soft palate could not be saved, but the result proved the contrary. No anæsthetic was used.

Diphtheria of Larynx.—Dr. PUTNAM-JACOBI presented the larynx and spinal cord of an infant who died from symptoms that resembled, in some particulars, aborted cerebro-spinal meningitis. The patient was attacked two weeks before death with vomiting and fever. The pulse was rapid, and at times slow and intermittent. There was no gastro-intestinal trouble. The child did well for a time, and then died in a comatose state. At the autopsy the larynx was found to be covered with a diphtheritic membrane. The spinal cord contained a clot at a short distance below the medulla oblongata. The point of interest in the case was that the mother had suffered from somewhat similar symptoms previous to the child being attacked.

Stenosis of the Pylorus.—Dr. Finnel presented a stomach in which the pyloric extremity was contracted to such an extent as to barely allow the passage of an ordinary catheter. The patient was fifty years of age, and three months before her death was in good health. Vomiting began three weeks before, and lasted till death, which took place from exhaustion. The specimen was referred to the Microscopical Committee. A gross examination did not decide whether the stenosis was due to malignant disease, or cicatrization the result of ulceration of the upper part of the duodenum.

Dr. Finnel also presented fragments of the upper jaw of a patient suffering from necrosis. The disease was apparently of syphilitic origin, and affected either side of the median line.

Suppurative Pyelitis.—Dr. Monell recited the history of a case of pyelitis in which several calculi were found in the pelvis of the kidney. The patient had been in the habit of passing from eight ounces to a quart of pus daily.

Sudden Death from Development of Gas in the Right Ventricle of the Heart.—Dr. Janeway presented a specimen of heart obtained from a patient who died suddenly. The marked interest of the case consisted in the fact that none of the explanations offered gave a satisfactory account of the method in which the gas which was found in the right ventricle made its appearance there. The history of the case was as follows: A woman entered Bellevue Hospital in January, suffering from pelvic peritonitis. Subsequently she had an attack of pleuro-pneumonia, which passed into empyema. For the treatment of the empyema the chest was opened, and the pus washed out. Two days after the opening was made, and after the daily washing out was completed, the patient suddenly died. At the autopsy, the right ventricle was found distended with gas, and on puncture it escaped with a noise which showed that it was under pressure. There was no air either in the left auricle or left ventricle. There was a clot in the right ventricle, but no fluid blood. An examination of the veins was made, but no evidences of the admission of air through them could be obtained, nor indeed through any of the arteries. There was no frothy blood in the ventricle. There was no sign of decomposition either in the blood or in any of the viscera, and Dr. Janeway was forced to the conclusion that the appearance of the gas could in no satisfactory way be accounted for other than its sudden evolution from the blood—the process possibly resembling the secretion of air from the blood in the intestines.

The formation of the gas did not occur from the withdrawal of pressure, inasmuch as the chest had been thoroughly washed out, and the house-physician was in the act of withdrawing the catheter. Dr. Janeway said that similar cases had been reported, but that no satisfactory explanation had been offered.

Bright's Disease.—Dr. Finnel presented kidneys taken from a patient who had died of coma. Some discussion took place in regard to the administration of narcotics in coma and convulsions, but no definite results were reported.

Dr. Messinger also presented a kidney which showed evidences of chronic nephritis.

Bibliographical and Literary Notes.

Art. I.—*Report of the Fifth International Ophthalmological Congress.* Held in New York, September, 1876. D. Appleton & Co.

This copy of the Transactions is a handsome octavo volume, of two hundred and sixty-five pages, and is the fifth report of he kind that has been published. The Congress meets once in four years in different cities, and the papers presented at any one meeting are afterward published. The fifth quadrennial report contains a list of twenty-seven papers by native and foreign members of the Congress, most of which will compare very favorably with the papers presented in former years. The fifth report resembles in external appearance the report of the fourth Congress, held four years ago in London, but is superior to it in some respects. One omission is to be noted in the table of contents, Dr. Gowers's paper on "Optic Neuritis" not being mentioned, though it occupies its proper place on page 14 of the volume. Most of the papers are by native members of the Congress, as was to be expected; but one at least of the foreign members, Dr. Hansen, of Copenhagen, is represented by an exceedingly able and interesting paper on "Hypermetropic Squint." The first article is by Dr. Noyes, of New York, on a method of blepharoplasty, by taking the flap from the side of the nose and adjacent portion of the cheek; and, if we may judge from the result in two cases cited, is well adapted to remedy defects of tissue where the necessary flaps cannot be taken from the temple and cheek, owing to the presence of cicatricial tissue.

The paper of Dr. Heyl, on "Coloboma of the Lens," is an interesting clinical and historical study, and bears evident marks of patient, accurate observation, and careful research into the causation of a rare anomaly.

The fourth paper is by Dr. Noyes, and is a modification of some of the canthoplastic operations done upon the external angle of the eyelids for relieving the pressure of the lids upon the eyeball in certain diseases of the cornea. Though apparently temporarily successful, it is probable that all of the difficulty is not removed, owing to the exceedingly unfavorable condition of the conjunctiva in these cases. The indications for its employment are, however, very clearly given, and it certainly seems to be efficacious in controlling nervous spasm of the lids.

In a paper on "Sympathetic Neuro-Retinitis," Dr. Al opens up a subject of great interest, and enters upon a field which we have studied but little. The possibility of the optic nerve acting as the channel through which irritation is carried to the sound or uninjured eye, is to most of us a new feature in ophthalmic pathology, and yet one which is by no means improbable. Certainly, the attention of ophthalmic surgeons should hereafter be carefully directed to all cases of sympathetic trouble. Another point to which Dr. Alt calls attention is that, in the seven cases which form the basis of his paper, sympathetic neuro-retinitis was more frequently induced by a non-traumatic affection of the eye first attacked, which is contrary to the results of the statistical literature of other forms of sympathetic ophthalmia.

The paper on "Orbital Tumors," by Dr. Knapp, is devoted especially to the necessary operative procedures employed in removing four varieties of morbid growth from this neighborhood, viz.: 1. Orbital exostosis, illustrated by four cases; 2. Retention-tumors of the neighboring cavities, illustrated by one case; 3. Sarcoma and chondroma of the orbital wall; 4. Growths in the neighboring cavities of the eye.

Prof. Nagel, of Tübingen, again brings up the subject of the importance of introducing the metre-measure for the determination of lenses, in a short paper, and the subject is emphasized by both Drs. Loring and Knapp in their papers upon metrical ophthalmoscopes.

Dr. Loring's paper, on the "Halo round the Macula," is quite a long one, in which he reiterates and more fully explains his idea of what causes the halo, and defends his view from the attack made upon it by Brecht, in the *Archives of Ophthalmology*. The question involved is purely a scientific one, and the paper seems to fully explain the phenomenon, and end the controversy.

Dr. Hansen, of Copenhagen, in an able paper on "Hypermetropic Squint and Insufficiency of the Internal Recti," discusses especially the inherent condition of the extrinsic muscles of the eyeball. He thinks that the myopathic or anatomical reason given for squinting is due to a false conception, and that the real cause of the squint is the abnormal situation of the range of accommodation. He considers that Schneller's views, recently so widely promulgated, are only the old ideas of Giraud-Teulon in a new dress. He insists upon the fact that every hypermetropic squint depends upon the relation between accommodation and convergence, and that "convergence is partly an immediate expression for the accommodation used in the moment of fixation, partly an expression for the unconscious innervation to convergence arising from accommodation, and lasting during its state of rest." Hansen also remarks, and justly, that Schneller's weakness of the externi is identical with paresis of the muscle. Finally, in a few well-chosen words, he explains his reasons for not giving in his adherence to the general belief in the extreme precision of the determination of refraction by the ophthalmoscope. In the section on insufficiency of the interni, he admits three varieties of insufficiency: 1. Relative insufficiency, the most frequent form; 2. Latent divergence occurring in emmetropes, hypermetropes, and myopes of slight degree; 3. Divergence depending on the want of fusion. The entire paper is well worth careful reading.

There are four readable papers upon the various forms of ametropia with asthenopia, viewed from a clinical standpoint, by Drs. Roosa, Noyes, Agnew, and Dyer, in which great attention and care are given to the accurate examination of all the individual symptoms of each case, and the treatment to be persistently followed. The subject is of great importance, inasmuch as a very large percentage of ophthalmic patients belong to this category, and the etiology and pathology of varieties of asthenopia are by no means as yet clearly understood.

In a paper upon the ciliary muscle, Loring concludes, from observations made by himself and others, that the differences in shape and structure of the muscle, as regards refraction, are due rather to mechanical conditions than to difference of function of the different parts of the muscle. He asserts what is very true, that it has never been really shown that the ciliary muscle exerts the slightest traction on the posterior parts of the choroid, as has been widely claimed for it, and that we need to investigate the physiology and anatomy of the muscle much more thoroughly.

In conclusion, we would call attention to a short paper by Dr. Dupuy, upon the "Inherited Effects of Lesions of the Sympathetic Nerve on the Eye," containing an account of some interesting experiments upon animals, in which heredity manifested itself through four or five generations of animals. The same hereditary tendency was observed to follow lesion of the restiform bodies, that is, exophthalmus.

Art. II.—*The Tonic Treatment of Syphilis.* By Edward L. Keyes, A. M., M. D., Adjunct Professor of Surgery, Professor of Dermatology in the Bellevue Hospital Medical College, Surgeon to Bellevue Hospital, etc. Pp. 83. New York: D. Appleton & Co.

The first impulse of the reviewer is to dismiss a work upon treatment, especially of so well known a disease as syphilis, with scanty notice, but the present book is well worth careful examination on more than one occount. It is not simply a record of empiricism, not a mere collection of prescriptions, but a plea for the thorough radical treatment of this most formidable disease; an indication in detail of the ways in which its many manifestations are to be met; and a well-conceived defense, based upon physiological as well as clinical data, of the principal therapeutic agent employed. The author is well known to be a close observer, of mature mind, cool judgment, and plentiful experience, and the book is filled with the evidence of conviction following doubt and distrust that have been fairly overcome. Few physicians in our country have had equal opportunities with Dr. Keyes to judge of the value of the treatment of syphilis, and none have brought to that judgment a more sincere desire to know the truth for the truth's sake, and a mind better fitted to avoid the errors of enthusiasm, imperfect observation, and improper deduction.

A year or two ago Dr. Keyes had the happy idea of applying to his treatment of syphilis an accurate scientific test, he means of which were furnished by a recently-invented nstrument for determining the actual number of the formed elements of the blood, the hematimetre of Hayem & Nachet. This test was applied directly to the effects of mercury upon he system, and with the happiest results, for it proved beyond a question that in moderate doses the drug is a most valuable tonic, suitable to the child as well as to the adult, and free from the objections which so often interfere to limit the applicability and usefulness of those in general use.

There are few or none who doubt the ability of mercury to control most of the manifestations of syphilis, but there is a very wide-spread distrust of the remedy on account of the injury to the system, especially the bony parts and teeth, which it has been known to cause. That these injurious effects will follow the administration is too well known; the error has lain in the inference that the same danger was associated with the use of small doses, and the fear inspired by this inference has led physicians to limit their treatment of syphilis to the periods of its manifestations. We all know how disastrous this practice has been. The disease, scotched but not killed, reappears when least looked for, either in its destructive, disfiguring tertiary forms, or as recondite nervous lesions, or as causing miscarriage, or as inherited syphilis visiting the sins of the fathers upon the children, and preparing a plenteous harvest of sorrow and disease.

Dr. Keyes claims that if patients affected with syphilis are kept for two, two and a half, or three years continuously upon minute doses of mercury they will, in at least a great majority of cases, escape the more important manifestations of the disease during treatment, and remain entirely free from it thereafter—in a word, that they will be absolutely cured. His plan is to begin with say three-fifths of a grain of the protiodide daily, and increase slowly until the point of tolerance is reached. The dose thus reached he calls the "full dose," and, if it is not sufficient to control any symptoms that may be present, it must be aided by inunctions or baths. Half of the "full dose" he calls the "tonic dose," and this is the one which is to be chiefly relied upon during the treatment. So long as the patient is free from symptoms the tonic dose alone is used, and the "reserve"—the difference between the tonic and the full doses—is employed in whole or in part to combat any intercurrent symptoms. This is the essence of the treatment. Our space will not allow us to describe in detail the measures recommended for employment against the different lesions, and under exceptional circumstances. They are all described with a minuteness of detail, both with reference to the manner of employing them and to the indications for their use, which will be found very helpful.

The book is divided into three parts: the first is devoted to an examination of the action and effects of mercury and the iodides; the second, to the details of general treatment; the third, to local treatment and the special means adapted to special lesions. It is made to cover every point that may arise in the treatment of a case, and is full of practical suggestions. We recommend it heartily to the profession.

Art. III.—*The Practitioner's Hand-Book of Treatment; or, The Principles of Therapeutics.* By J. Milner Fothergill, M. D., Member of the Royal College of Physicians of London; Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park; Assistant Physician to the West London Hospital. Philadelphia: Henry C. Lea, 1877.

There is much that is original in the plan and character of this work. It is an attempt to explain and elucidate the *modus operandi* of the various medicinal agents in common use. "It is a golden rule," the author says, "never to prescribe in an off-hand, slipshod manner; whoever does so will sooner or later trip. It is well always to construct, as far as possible, a distinct scheme and a definite plan of treatment. No matter how slight or trivial the case, it is desirable always to act on an intelligible and intelligent plan." This is the key-note to the entire work. After a brief introduction, reviewing the art of prescribing, and a chapter on assimilation, the different pathological conditions are taken up in order, and the appropriate remedies for each considered; first in a broad, comprehensive manner, and afterward in detail. This arrangement involves, of necessity, a sketch of the physiology and pathology of each class of diseases as far as they bear on the important question of treatment. The work is, therefore, in a limited sense, one on the practice of medicine, though differing from other treatises on practice, in the prominence given to the consideration of therapeutics. The chapters following that on assimilation take up in succession the subjects of excretion, heat and fever, inflammation, anæmia, plethora and congestion, growth and decay, abnormal growths, blood-poisons and specific poisons, acute and chronic disease, diabetes, rheumatism and gout, diatheses and cachexiæ, action and inaction, the circulatory, respiratory, digestive, urinary, reproductive, cutaneous, lymphatic, and nervous systems, public and private hygiene, and nutrition in health and sickness.

The author tells us that he has been nine years collecting and arranging the material here presented. He has labored with a definite object, and has succeeded in producing a volume that will be found an exceedingly useful companion to the standard works on practice. It abounds in information of value at the bedside, and is eminently practical throughout.

Art. IV.—*Modern Therapeutics: a Compendium of Recent Formulæ, Approved Treatment, and Specific Methods in Medicine and Surgery, with an Appendix on Hypodermic Medication, Inhalation, Aëration, and other Remedial Agents and Therapeutic Methods, of Recent Introduction.* By George H. Napheys, A. M., M. D., etc. Fourth edition, rewritten and enlarged. Philadelphia: D. G. Brinton, 1877.

The first edition of this work appeared in 1870. Since then it has been greatly enlarged and improved, and is now a valuable collection of the best prescriptions that can be obtained, so arranged as to prove exceedingly useful and suggestive to the practitioner. The author had only partially completed his last revision when he was prostrated by the illness that proved fatal; but he had so far systematized his material as to enable others to carry out his plans. The value of the work is enhanced by a triple index—one giving the names of the authors quoted, another the diseases treated of, and the third the remedies. From the index of authors it is evident that the author has gleaned largely in prescriptions from distinguished foreign authorities, and it is curious to compare their modes of treatment with those in vogue in this country.

ART. V.—*The Medical Register and Directory of the United States, systematically arranged by States; comprising Names, P.-O. Addresses, Educational and Professional Status, etc., of more than Fifty Thousand Physicians, with Lists of Hospitals, Colleges, etc., and Abstracts of the Medical Laws of each State.* By S. W. BUTLER, M. D. Second edition, revised and corrected. Philadelphia: Office of the *Medical and Surgical Reporter*, 1877. Pp. 874.

THE second edition of this valuable work has been prepared with much careful labor, and is a great improvement on the first. The entire volume has been thoroughly revised, and the various changes duly recorded. It is by far the most complete directory of the kind ever published in the United States, where the mere extent of territory, to say nothing of the irregularity in the registration of physicians, will make it impossible, for many years to come, to attain absolute accuracy.

ART. VI.—*A Manual of Midwifery.* By ALFRED MEADOWS, M. D., London, F. R. C. P.; Lecturer on Midwifery and Diseases of Women and Children at St. Mary's Hospital, etc. Second American, from the third London edition, revised and enlarged. With One Hundred and Forty-five Illustrations. Philadelphia: Lindsay & Blakiston, 1876.

WE expressed the opinion, in noticing the previous edition of Dr. Meadows's manual, that it was too small and incomplete to become a rival of the text-books on the same subject in ordinary use. Since that time several new works on obstetrics have appeared, and the field would seem to be fairly occupied. The volume before us has been considerably improved in the revision, and upward of sixty new engravings have been added.

Art. VII.—*How to use a Galvanic Battery in Medicine and Surgery. A Discourse upon Electro-Therapeutics, delivered before the Hunterian Society, November* 8, 1876. By Herbert Tibbits, M. D., Fellow of the Royal College of Physicians in Edinburgh, etc. London: J. & A. Churchill, 1877.

This little pamphlet contains a number of useful directions for the care and use of galvanic batteries, and a full description of the various batteries devised by the author, with some valuable hints as to their appropriate employment in the treatment of disease.

Books and Pamphlets Received.—Handbook for Attendants on the Insane. By L. S. F. Winslow, M. D., D. C. L., etc. London: Baillière, Tindall & Cox, 1877. Pp. 36.

Diagnose und Therapie der Krankheiten des Menschen, mit Zugrundelegung der Lehren und Recepturen der ersten medicinisch-chirurgischen Autoritäten, und Anführung von 1,500 Receptformeln im metrischen Gewichte. Nebst einem Anhange über Balneologie von Dr. Bernard Kraus, Chefredacteur der *Allgemeinen Wiener medicinischen Zeitung*. Wien: Verlag von Moritz Perles, 1877. Pp. 980.

Public Health Papers. No. I. On the Relations of Health Boards and other Sanitary Organizations with Civic Authorities. By Ely McClellan, M. D., Surgeon U. S. A. Delivered by request before the Board of Health of the State of Georgia, January 8, 1877, in the Senate-Chamber, Atlanta, Ga.

The Operation of Vesico-Vaginal Fistula: A Comparison of the Methods of Operation of N. Bozeman, M. D., and Prof. G. Simon. Illustrated with Twelve Woodcuts. Illustrated by A. C. Bernays, M. D., St. Louis, Mo. Reprinted from the *Richmond and Louisville Medical Journal.*

A Course of Practical Histology: Being an Introduction to the Use of the Microscope. By Edward A. Schäfer, Assistant Professor of Physiology in University College, London. With Illustrations on Wood. Philadelphia: Henry C. Lea, 1877.

Education and Care of Idiots, Imbeciles, and Harmless Lunatics. Report of a Special Committee of the Charity Organization Society. Presented to the Council, January 15, 1877. London: Longmans, Green & Co. Pp. 40.

Du Darwinisme, ou l'Homme-Singe. Par le Docteur Constantin James, Ancien Collaborateur de Magendie, Chevalier de la Légion d'Honneur et des Ordres de Léopold de Belgique, etc., etc. Paris: E. Plon et Cie., 1877. Pp. 320.

Analysis of One Hundred and Nine Cases of Rheumatism treated with Salicylic Acid and Salicine. With Tables. By C. W. Brown, M. D. Reprinted from the *Boston Medical and Surgical Journal*, February 8, 1877.

Pneumatic Pressure and the Genu-Pectoral Posture in the Reduction of Uterine Luxations. By A. S. Campbell, M. D., Augusta, Ga. Reprinted from the *American Journal of Obstetrics* for January, 1877.

The Germ-Theory applied to the Explanation of the Phenomena of Disease. The Specific Fevers. By T. Maclagan, M. D. London: Macmillan & Co., 1876.

Transactions of the Kansas Medical Society at its Annual Session, held in Leavenworth, May 10 and 11, 1876. Tenth Meeting since Reorganization.

Transactions of the Fifth International Congress of Ophthalmology, held in New York, September, 1876. In one octavo volume of 265 pages. Cloth. Price, $2.50. New York: D. Appleton & Co., 1877.

Catalogue of the Trustees, Professors, and Students, of the Jefferson Medical College of Philadelphia. Session of 1876–'77.

Annual Report of the Managers of the Western Pennsylvania Hospital for the Insane, 1876.

The Use of Uterine Supporters. By Clifton E. Wing, M. D. Read before the Norfolk District Medical Society, Mass.

Seventh Annual Report of the New York Ophthalmic and Aural Institute for the Year 1876.

Transactions of the Medical Society of the State of Tennessee, 1876. Pp. 182.

Second Annual Report of the Board of Health of the State of Georgia, 1876. Atlanta, Ga.: James P. Harrison, 1877. Pp. lxxxviii.–198.

Proceedings of the Academy of Natural Sciences of Philadelphia. Part III. October, November, and December, 1876. Pp. 250.

Reports on the Progress of Medicine.

REPORT ON LARYNGOLOGY.

No. IX.

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BIBLIOGRAPHY.

1. Jelenffy.—On Voice without Vocal Cords. *Wiener med. Wochensch.*, Nos. 46, 47, 1876.

2. Illingworth.—On the Human Voice. *Edinburgh Medical Journal*, December, 1876.
3. Landois.—"Voices of Animals," Review of Book on the. *London Medical Record*, December 15, 1876.
4. Libermann.—Critical Studies on Laryngoscopy. *Gaz. de Hôp.*, December, 23, 30, 1876.
5. Collin.—Apoplectiform Spasm of the Larynx. *Gaz. Méd. de Paris*, December 23, 1876.
6. Robinson.—Aphonia of Ten Months' Duration from Paralysis of the Arytenoideus Proprius Muscle, with Concomitant Heart-Disease (Aortic Obstruction). Voice restored by the Direct Application of Electricity to the Vocal Cords. *Am. Jour. Med. Sciences*, January, 1877.
7. Budin.—On the Laryngeal and Pharyngeal Affections in Locomotor Ataxia. *Le Progrès Méd.*, February 3, 1877.
8. Riegel.—On the Symptomatology of Stenosis of the Greater Air-Passages. *Berlin. klin. Wochensch.*, No. 47, 1876.
9. Pajet.—On the Various Forms of Paralysis of the Larynx. *Thèse de Paris*, Delahaye, 1877.
10. Simyan.—A Contribution to the Study of Tertiary Syphilis of the Larynx. *Thèse de Paris*, Delahaye, 1877.
11. Krull.—A Study of the Articulations of the Larynx. Inaugural Dissertation. Göttingen, 1876.
12. Descounts.—A Contribution to the Study of Primitive Cancer of the Larynx. *Thèse de Paris*, No. 370, 1876.
13. Anderson.—Acute Laryngitis following the Arrest of a Fragment of Nitrate of Silver in the Pharynx; Tracheotomy; Death. *Lancet*, July 29, 1876.
14. Richard.—Œdema of the Glottis, consecutive to a Simple Angina, with Rapid Death. *Union Méd.*, No. 102, 1876.
15. Cartier.—A Case of Caries of the Larynx; Fistulous Opening between the Œsophagus and Trachea, caused by the Pressure of a Tracheotomy-Tube left in Position for Six Years. *Ann. de l'Oreille et du Larynx*, December 31, tome ii., No. 6.
16. Masson.—A Case of Caries of the Larynx; Death. *Ann. de l'Oreille et du Larynx*, December 31, tome ii., No. 6.
17. Bouveret.—On Ulcerative Angina occurring in the Course of Typhoid Fever. Idem.
18. Hermantier.—On the Extirpation of the Larynx. History of the Operation, Operative Steps, etc. *Thèse de Paris*, 1876.
19. Baginsky.—A Rare Disease of the Larynx and Trachea (Laryngo-Tracheal Ozæna). Trans. Med. Soc. of Berlin, May 17th. Reported in *Medical Record of London*, December 15, 1876.
20. Alvin.—An Electric Apparatus for Laryngoscopic Purposes. *Bull. Gén. de Thérap.*, November 30, 1876.
21. Roth.—A New Drop Syringe for the Larynx. *All. Wiener med. Zeitung*, Nos. 48, 49, 1876.
22. Davis.—A New Laryngeal Sponge-Holder and Forceps. *Chicago Med. Jour. and Ex.*, January, 1877.
23. Hulke.—Case: Lodgment of a Tracheotomy-Tube in the Right Bronchus, and its Extraction. *Brit. Med. Jour.*, December 2, 1876.
24. Whistler.—Impaction of a Bone in the Larynx for Five Weeks; its Removal by the Aid of the Laryngoscope. *Lancet*, December 2, 1876.
25. Maunder.—A Foreign Body in the Left Bronchus; Tracheotomy; Recovery. *Lancet*, December 16, 1876.

26. Baker.—On the Use of Flexible Tracheotomy-Tubes. *British Med. Jour.*, December 2, 1876.

27. Cameron.—Clinical Observations on Cases of Tracheotomy. *Brit. Med. Jour.*, January 20, 1877.

28. Garner.—Ammoniated Tincture of Guaiacum in Inflammation of the Throat. *Canada Lancet*, July, 1876.

29. Porter.—The Surgical Treatment of Enlarged and Inflamed Tonsils. *St. Louis Clin. Rec.*, September, 1876.

30. Rumbold.—The Function of the Uvula and the Prominences formed by the Azygos Uvulæ Muscles. *St. Louis Med. and Sur. Jour.*, December, 1876.

31. Dow.—On the Reflex Irritation caused by an Elongated Uvula. *Am. Med. Weekly; Brinton's Half-Yearly Compendium*, January, 1876.

32. Christoforis.—On Nervous Cough due to Anteversion of the Uterus. *Lyon Méd.*, November, 1876.

33. Lincoln.—Selected Cases of Hypertrophied Glandular Tissue of the Vault of the Pharynx and Other Hypertrophied Tissue of the Nasal Passages; with Symptoms of Post-Nasal and Nasal Catarrh cured with the Galvano-Cautery; together with Remarks, and a Description of the Instrument. *Medical Record* (N. Y.), No. 321, December, 1876.

34. Voltolini.—On a New Method of Rhinoscopy. *Monatsschr. für Ohrenheilkunde*, August, 1876.

35. Ritter.—Callous Formation in the Nostril. *Memorabilien. Am. Prac.*, December, 1876.

36. Tauber.—Ozæna Syphilitica. *Cincinnati Lancet and Observer*, December, 1876.

37. Bitot.—On Cauterization of the Pharyngeal Mucous Membrane in the Treatment of Amnesia. Trans. Academy of Medicine of Paris, October 31st. Reported in *London Medical Record*, December 15, 1876.

38. Spaak.—On a Case of Hæmorrhagic Tumor of the Naso-Pharyngeal Cavity; Nervous Aphonia; Cure. *Ann. de l'Oreille et du Larynx*, tome ii., No. 6, December 31, 1876.

39. Spaak.—A Case of Sudden Paralysis of the Velum Palati; Cure. Idem.

0. Wharton.—How to cure a Bad Cold. *Virginia Med. Monthly*, January, 1877.

1. Braune and Clasen.—A Study of the Nasal Cavities in their Relation to the Function of Smell. *Zeitschr. für Anat. u. Entwicklung*, ii., 1 and 2, page 1, 1876.

2. Fränkel.—On Miliary Tuberculosis of the Pharynx. *Berlin klin. Wochenschr.*, November 13, 20, etc., 1876.

3. Le Dentu.—On Tuberculous Ulcerations of the Mouth in General, in Relation to a Case of Tuberculous Ulceration of the Lips. *La France Méd.*, January 17, 1877.

4. Lang.—Intussusception of the Trachea. *Memorabilien*, January 11, 1876.

5. Johnson.—On Thyrotomy, with the Reports of Four Operations. *Chicago Med. Jour. and Ex.*, January, 1877.

6. Browne.—Cases illustrating the Successful Treatment of Suffocative Goitre, without Excision of the Thyroid Gland. *Brit. Med. Jour.*, December 30, 1876.

7. Casson.—On the Treatment of Suffocative Goitre. *Brit. Med. Jour.*, January 6, 1877.

8. Tordeus.—On the Treatment of Spasm of the Glottis. *Jour. de Méd. et de Chir. Pratiques*, December, 1876.

3. Prof. Landois, of Freiburg, has lately published an interesting work on "The Voices of Animals," which affords additional evidence of the universality of vocal sounds among the lower forms of animals, including the mollusca. The author considers it beyond all question that ants possess a vocal speech, inappreciable by human ears, by which they are enabled to exercise those higher mental faculties to which they owe the development of the advanced social organization which they exhibit in their communities. Prof. Landois's work is illustrated by numerous microscopical and other drawings of his own, and forms an interesting addition to our natural-history literature.

18. The following *résumé* of the literature of the operation for entire extirpation of the larynx—taken from the published articles of Maas and Hermantier—will be of interest:

Maas states that the operation—which has already become a tolerably frequent one in Germany—has been performed ten times (he includes the case of partial extirpation or *resection* of the larynx by Heine) up to the present date. The majority of these cases are carefully analyzed, the rest more or less thoroughly referred to in the *Revue des Sciences Médicales*, iv., 306; vi., 319; vii., 300, 408, 735; viii., 335. In his article Maas details the history of a case operated upon in June, 1874, which has not been before reported. The patient—age not given—suffered from a carcinomatous adeno-fibroma of the larynx. Death followed the operation of extirpation of the larynx on the fourteenth day, from a broncho-pneumonia. Before recourse was had to extirpation, tracheotomy had been done some time previously, but the extreme dysphagia, caused by the increasing volume of the tumor, led Maas to more active interference.

Hermantier, in his valuable *brochure*, the title of which is given in our bibliography, has collected the statistics of nine cases of extirpation of the larynx (he does not include Heine's resection), of which one has not, as yet, been published (Billroth's second case). They are as follows: Billroth two, Maas two, and Heine, Schmidt, Schoenborn, Bottini, and Langenbeck, each one.

In all the cases the operation has been undertaken on account of intralaryngeal tumors of a malignant nature (epithelioma, sarcoma, cancer).

Death has followed in six cases, twice from a recurrence of the growth: in Billroth's first case in three months, in Heine's case in six months, twice from pneumonia developing on the fourteenth day (Maas), or on the fourth (Billroth's second case). In a third case (Schoenborn) the patient died on the fourth day, from a pneumonia complicated by gangrene of the lung. In one case alone, that of Schmidt, was death due to collapse (sixth day).

Regarding the success of the operation, the following facts are given: Bottini's patient was reported as being alive and well six months afterward. Maas's second case (history given above) has been reported as a cure; as regards the case of Langenbeck, more precise information is desirable—its record ceasing soon after the operation.

Heine, alone, has performed a partial extirpation or resection of the larynx (his second case); death followed in eleven months the successful operation, from the progress of the affection for which it was done.

To sum up, then, we have upon record ten cases, upon which the total or partial extirpation of the larynx has been performed. Out of this number one case alone—that of Bottini—is known to have been alive six months after the operation. In two others a successful termination is asserted—or was hoped for—but as to facts no report is given.

In all the other cases the record of the autopsy can be added to complete the history.

19. Dr. Baginsky showed a boy, aged twelve and a half years, the subject

of a diseased condition of the larynx and trachea, which he had not found described in literature. The disease occupied the larynx and trachea, which could be examined by sunlight or good artificial light, as far as the eighth or ninth ring. For some time the boy's mouth had had a disagreeable smell, and he had coughed up offensive, greenish masses; in other respects his health was good and he was fairly well-developed, and there was no family history of scrofula or syphilis; there was slight pharyngeal catarrh and swelling of both lower nasal fossæ. On examination with the laryngoscope between the true vocal cords and on the wall of the thyroid and cricoid cartilages, and especially in the trachea, there were seen soft, greenish-gray masses firmly adherent to the mucous membrane, from which small portions were occasionally dislodged by coughing. Between them the mucous membrane was denuded of its epithelium, eroded, and bleeding readily. Treatment by inhalations of carbolic acid, resolvents and astringents, and the internal use of sirup of the iodide of iron, had as yet been without result. Microscopic examination of the green masses showed a quantity of epithelium that had undergone fatty degeneration, with crystals of tyrosin and small moving corpuscles. The disease had a great resemblance to nasal ozæna, and the condition called by Waldenburg "pharyngitis impetiginoides." Dr. Baginsky believed that it was not analogous to putrid bronchitis: in this disease the expectoration was very abundant and fluid, while in the present case it was very scanty. From the resemblance to nasal ozæna he would propose for it the name of laryngo-tracheal ozæna. The prognosis was unfavorable, as perichondritis was to be feared. He also showed in the same patient a specimen of benign mycosis of the pharynx.

Dr. Fränkel said that he had several times seen the patient. He had seen several cases of ozæna of the larynx, and had referred to them in his article on ozæna in Ziemssen's "Cyclopædia." But, until he saw this case, he had never met with one in which the fetid masses were below, instead of above, the vocal cords. As regards the fetid masses in the trachea, he had found much fatty epithelium and fungi, and also crystals of tyrosin. He could not determine whether there was any connection as regards cause between the fetid deposits and the mycosis of the pharynx. However this might be, leptothrix was present in both.

21. At a meeting of the Royal Medical Society of Vienna, Roth showed an instrument for making applications to the larynx, consisting of a properly-curved tube of gutta-percha, with a fine opening, and fitted with a piston, by which medicated fluids could be applied either in drops or in a stream.

26. Mr. Baker has recently introduced into surgical use a red India-rubber tube of the shape of an ordinary tracheotomy-tube. This tube was highly eulogized in a recent discussion at the Royal Medical and Surgical Society, and its flexibility and smooth softness offer obvious advantages in use.

27. This is a readable and interesting paper—practical and to the point. It is based upon the experience afforded by twelve cases of tracheotomy; two of the histories, both of great interest, being given in full. Among the remarks upon the operation which follow, the first has reference to a complication which may occur during the operation—probably the most dreaded because the most embarrassing—viz., hæmorrhage. To guard against it and the mishaps to which it may lead, the writer believes that it is only necessary to attend to three points, all of which have often been insisted upon. These are, to make the first incision scrupulously in the median line; secondly, to make no attempt to open the trachea until its rings are visible—or felt with the forefinger of the left hand to be quite exposed and bare; and, lastly, the operator must be careful to make his

deep dissection correspond as much as possible to the centre of his original wound; or, in other words, it is necessary that he should avoid cutting too much toward the trunk. The reason is obvious. In short—as a French author has well said—"an ideal wound would be that in which the wound of the integuments would form the base of a triangle, of which the apex would be represented by the tracheal wound." The second accident which is alluded to may be emphysema; and still another, which is encountered in the after-progress of some cases, and which, if the surgeon be not forewarned in regard to it, may occasion surprise and alarm, is the escape from the tracheotomy-wound of fluids which are swallowed. Both these are considered by the writer in detail, and the cause of the latter explained. Ulceration of the trachea by pressure of the tube is alluded to incidentally, as well as the management of false membranes, or inspissated mucus obstructing the windpipe below the tube, and so frustrating the object of the operation. Finally, a simple mode of supplying warm and moist air to the patient who breathes by a tracheotomy-tube is detailed.

28. Garner says that the ammoniated tincture of guaiacum in inflamed throats, whether acute or chronic, seems a remedy that is totally unknown to some practitioners, and wholly ignored by others. In fact, the profession seems to have forgotten to a great degree that the drug exists at all.

In cases of chronic hoarseness he uses it with almost invariable success in the form of a gargle; he also uses the remedy in inflamed throats, and finds it most powerful as a remedy in all sorts of inflammation of the fauces. In the first stages of quinsy its action is astonishing: it seems to scatter the disease at once; of course, if pus has been formed, it cannot be expected to cause absorption, but it will allay inflammation and give speedy relief. In cases of inflamed tonsils and sore-throat, when produced by or accompanying measles, scarlatina, cynanche, parotidis, and croup, he uses the pure tincture by means of a sponge probang.

The gargle he recommends is as follows: tinct. guaiaci ammoniæ, ʒ iij; liquor potassii, ʒ iij; tinct. opii, ʒ ij; aq. cinnamonii, ad. ℥ viij.

29. The doctor offers the following suggestions on the above subject: Locally-repeated pressure between a finger placed upon the tonsil, and one at a corresponding point externally, may empty the ducts, and produce absorption. If, however, the tonsil is hard and increasing in size; if it has attained any considerable enlargement, and is subject to repeated attacks of inflammation; if it produces marked irritation in the surrounding parts, or hinders deglutition or articulation, it is good treatment to remove it.

This may be done by means of a ligature—a difficult and dangerous method, but one that cannot be condemned; by the application of astringents and caustics, chromic acid being the most efficacious—London and Vienna paste give more pain, and do not produce any more pleasing results; by electrolysis, which can hardly be advised, though in some cases it has been employed to advantage; and, finally, it may be excised by the galvano-cautery (of use when hæmorrhage is feared), the tonsilitome, or the bistoury; of the two latter the author prefers the bistoury, regarding it as the simplest and best instrument. It is seldom necessary to excise the whole gland, but only the most prominent part; the follicles being thus cut through, there is no danger of retention of the secretions, while the cicatrix, which soon forms by contracting, further reduces the size of the gland.

31. Dow says of this organ: "As it becomes lengthened, it hangs lower down in the pharynx. It finally impinges upon and titillates the epiglottis; this in turn produces great irritation of the adjoining fauces. A spasmodic cough, peculiar in itself, will now be initiated, and the patient will complain of a strange tickling in the throat. Another frequent symptom

is a sensation as if something were in the throat which cannot be swallowed, as it seems to catch somewhere. When a case presents itself with the foregoing symptoms, the tongue should be depressed and the throat examined; it occupies but a second, and if the conditions of the uvula are not abnormal; the case can then be treated upon its real merits. If there is elongation, a portion should be removed."

The organ is subject to several kinds of enlargement, but the trouble seems to be only created by its length and bulk. An enumeration of the effects it thus causes includes difficulty in deglutition, trouble in speaking —the voice being sometimes materially changed—tickling at the root of the tongue, annoying cough, and frequent retchings. These symptoms which have been glanced at seem to be the offspring of a species of reflex irritation.

32. Christoforis reports the case of a woman, aged twenty-three, who had been treated for a nervous cough for a long time, with antispasmodics, but without success, and was finaily sent to him for a laryngoscopic examination. The patient had been pregnant once, two years before, but she aborted at the third month. Since then she had a slight leucorrhœa, and lumbar pains, which were augmented by walking or standing. The examination of the thorax, abdomen, and larynx, gave negative results. The cough occurred only during the day, and consisted of frequent short paroxysms, with intervals of repose varying from half an hour to two hours. No expectoration. The cough ceased immediately when the patient lay down. A vaginal examination revealed marked anteversion and considerable enlargement of the uterus. In the dorsal decubitus the organ resumed very nearly its normal position. The uterus was replaced and kept in position by Hodge's pessary, and the cough stopped at once. A few days later the pessary was withdrawn, but the anteversion was then reproduced, and the paroxysms of coughing returned, and continued until the pessary was reapplied. At the end of a year the uterus was very much diminished in size, and the anteversion so much modified that the patient did not cough even when the pessary was removed. (On this subject, *see* Ziemssen, vol. vii., p. 931.)

33. Lincoln's paper is a short but practical and interesting contribution to the therapeutics of the affection which is described in the heading to his article. It is based upon the histories of three typical cases, the results of treatment in which are thus summed up: In the first case, treatment was advised as follows: destruction of the adenoid tissue by means of the galvano-cautery, and of the polypoid growths in the nostrils by chromic acid, and subsequently spray applications of astringent solutions to the naso-pharyngeal tract and interior of the larynx.

The use of the galvano-cautery was declined, and a trial of the chromic acid desired. Seven applications of the latter were made to the growths in the vault of the pharynx, and three to the enlargement in the anterior nares, at intervals of from three to five days.

The nasal thickening was thus thoroughly removed, but in the postnasal region but little was accomplished, the tissue being unusually firm. My first recommendation was now yielded to, and three applications of the galvano-cautery, at intervals of a week, completely removed the remaining glandular tissue. A few applications of a spray of tannin, glycerine, and carbolic acid and water accomplished the removal of every evidence of disease, and relief of all the symptoms complained of.

In the second case, excisions of the tonsils and the use of the galvano-cautery on the adenoid tissue were urged. The first was not permitted; their removal, however, was undertaken by means of Vienna paste, and accomplished after four applications to each gland at an interval of four or ive days. Two applications with the galvano-cautery, with an interval of a week, completely removed the hypertrophied tissue above, and effected a complete cure.

In the third case, after removing the secretion from the adenoid tissue, a thorough application was made to it with the galvano-cautery, and to the nostrils and pharynx a spray of a solution containing three grains chromic acid and ten grains bichromate of potash in an ounce of water. At the expiration of a week the galvano-cautery was again used as before, and at the same *séance* a galvano-cautery needle was introduced well into the infiltrated tissue in the nostrils. It was two weeks before the eschar had entirely come away and the wounds healed, but the defective enunciation and the embarrassed breathing were already corrected. Extending over a period of two weeks longer, at intervals of about three days, applications of the spray and Politzer's method of inflation were practised, when the patient was discharged, cured of every evidence of disease in the naso-pharyngeal region.

The doctor says that formerly he relied in the treatment of hypertrophied glandular tissue at the vault of the pharynx, upon nitrate of silver, chromic acid, Vienna paste, or the curette, as advised by Meyer; but two years ago devised an instrument by means of which he could conveniently use the galvano-cautery, and which has superseded in his practice the other methods.

Its advantages are, its radical effectiveness, shortness of treatment—two or three applications being sufficient to remove the most extensive growths—and its comparative painlessness.

The instrument, of which a figure is given, consists of an ordinary Leiter's universal handle with an electrode, upon which is fixed a spiral spring terminating in a shield of bone which conceals a platina disk which terminates the electrode.

Pressure of this shield upon the tissues to be destroyed discloses the disk, and, after the cauterization is completed, as soon as the pressure is relieved the spiral spring forces the shield again forward so as to cover the disk, and prevents its burning the surrounding tissues during withdrawal of the instrument.

In some cases the shield described may be dispensed with, either on account of the patient being able to avoid contraction of the palate during an operation, or when it can be controlled by some retractor, as the rubber cord suggested by Dr. Wales.

34. Voltolini, of Breslau, describes a method by which the floors of the nasal cavities and the pharyngeal orifices of the Eustachian tubes may be examined. These regions are in favorable cases seen by the methods already in use; but it is only in exceptional cases that even one well practised in rhinoscopy gets a view of them. The method which he proposes is simple. The patient places and keeps the tongue in the position required, and the uvula is also set aside by any of the usual methods. The surgeon employs two separate laryngeal mirrors, their sizes corresponding to the pharyngeal space about to be examined. The first mirror introduced must have a longer handle than the usual laryngoscopic mirror, and be capable of being bent as desirable. A slight curve is given to it at the part next the handle, so that it passes over the tongue easily, and at that part which reaches the posterior pharyngeal wall it is bent to a right angle. The mirror at the end is passed up to the basis cranii, and so placed opposite the posterior nasal orifices. The second mirror is the usual laryngeal mirror, the back of which is pressed against the handle of the other, where it first ascends into the pharyngeal space. Light is thrown upon the shorter mirror, which reflects it to the longer, which again reflects it to the spot to be examined, an image of which is returned in the same way.

37. M. Bitot pointed out the good effects obtained in certain cephalic

neuroses, notably in amnesia, by the cauterization of the back of the throat. He comes to the conclusion that it is by the medium of the superior cervical ganglion that this modification of the pharyngeal mucous membrane produces these favorable effects.

40. The remedy is carbonate of ammonia in full and often-repeated doses. The established value of this medicine in pneumonia naturally suggests its employment in the catarrhal affections of the lungs and contiguous mucous surfaces. To be effective, it should be given in larger doses than are usually prescribed. The author has been in the habit of giving ten grains in mucilage every hour or two hours for one or two days in severe cases. With proper attention to other hygienic means, the patient will soon recover from the severest cold. He is not so liable to relapse as he will be after a course of sweating medicines, which leave the system sensitive to every change of temperature.

42. The attention that has of late been paid to the subject of *miliary tuberculosis of the pharynx*, and the increasing number of observations that are being placed upon record, have developed a lively interest in it. The following abstract of Fränkel's excellent paper—taken from a translation of it, which appears in the *London Medical Record* (Nos. 19 and 20, 1877)—will therefore be appreciated, as it aims to give a concise and practical *résumé* of the question as it now stands.

The author refers first to the literature of the affection, quoting Rühle, *Ueber Pharynx-Krankheiten;* Isambert, *Annales des Maladies de l'Oreille et du Larynx;* Weber, in Billroth and Pitha, *Chirurgie*, vol. iii.; Wagner, Ziemssen's *Handbuch der speciellen Pathologie und Therapie*, vol. vii.; and single cases—by B. Wagner, *Archiv der Heilkunde*, vol. vi., and E. Wagner, ib., vol. xii.; and, although mention of it is made by all of the above, he does not think that the disease has yet attained that citizenship in pathology to which its diagnostic importance and its pathological anatomy entitle it, nor that a good description of it yet exists.

His experience of the disease is based upon six cases, the full histories of which are given in the original article; and if we now, with the simultaneous use of the materials to be found in literature, endeavor to give a view of the pathology of the affection, and first turn to its etiology, the question arises, "Why, departing from its ordinary course, does the tuberculosis in these cases become localized in the pharynx?" To this no answer can be given; the question must be left open.

The second question which presents itself is, "Is the tuberculosis of the pharynx primary in these cases? That is to say, Is the pharynx the first organ in which the tubercles are developed?" In individual cases this question may certainly be answered in the negative, as the miliary tuberculosis of the pharynx accompanied a similar process in the lungs.

Isambert, however, describes cases in which the lungs and other organs were sound, while tuberculous ulcers were present in the pharynx. Fränkel has not seen such cases; all his had signs of phthisis at the apices of the lungs. In any case, however, the tuberculous disease of the pharynx frequently gives indications of being older than that in the other organs. We find extensive tuberculous ulcers in the throat, while the signs of apex catarrh are with difficulty detected in the lungs.

As regards the frequency of the occurrence of pharyngeal tuberculosis, Fränkel agrees with E. Wagner that "it is less rare than the scantiness of pathological and clinical observations would lead us to imagine." Relatively to the frequency of tubercle, however, it is rare. (*See* statistics in original article.)

As regards the pathological anatomy, general or at least widely-spread miliary tuberculosis has been found in the autopsies as yet made. Besides the gray and yellow nodules in the pharynx, they have been found on the lips, tongue, larynx, intestine, and margin of the anus. (Bucquoy, quoted by Isambert.)

The ulcers in the pharynx have a distinct tuberculous character; they are genuine lenticular ulcers. The ulcers which extend widely rather than deeply show a cheesy or bacon-like, but sometimes, and then only in parts, a granulating base. Their edges are irregular and eroded, sometimes partially bacon-like or cheesy, or surrounded with a small inflammatory areola. In the neighborhood of these ulcers are generally found a few single gray, generally submiliary, nodules. Where these lie more closely together and become confluent, there appears to the naked eye a gray infiltration, covered with the glistening superficial layers of epithelium. The result of the microscopic examinations confirm, in general, the observations already made (*see* the writings of E. Wagner and Isambert, who describe the investigations of Vulpian, Troisier, Cornil, and others).

In all Fränkel's cases there was more or less considerable swelling of the lymphatic glands, especially in the neck.

The most important subjective symptom is always pain in the throat, which is increased by the act of swallowing. The severity of the pain varies greatly in different cases, as also its character. Some patients complain of sharp, lancinating pain in the ear, caused by swallowing. This, however, is commonly met with in other forms of sore-throat, and does not depend, as some suppose, upon ulceration in the neighborhood of the Eustachian tubes. All patients then experience more or less dysphagia, and avoid swallowing as much as possible, on account of the pain which the act causes.

Solid food cannot be taken when there is extensive ulceration, and fluids are often regurgitated through the mouth or nose. To this difficulty in taking food is to be ascribed, in part at least, the rapid emaciation which characterizes the later stages of the disease.

Among the objective symptoms the ulcers come into the foreground. These present, throughout, the tuberculous character. They generally begin in the lateral walls of the pharynx, and thence spread to the roof of the mouth and the posterior wall of the fauces, as well as the velum palati—appearing to follow a course transverse to, rather than in the line of, the axis of the body. It can be observed in all stages of the same case from the deposition of isolated or confluent gray nodules to the formation of large ulcers which appear to have undergone caseous degeneration. The uvula when involved is enlarged, infiltrated with hard nodules; some as large as lentil-seeds. Sometimes there is a tendency to hypertrophy, with polypoid excrescences about the tonsils.

The ulceration never attacks the œsophagus, but sometimes extends to the lips and tongue. The larynx is generally not affected until the disease has made considerable progress in the pharynx; but it would seem that eventually it always becomes involved—the first indication of which will be œdema, followed by rapidly-spreading ulceration, especially of the epiglottis. The disease in this locality runs its course, then, especially as a tuberculosis of the *upper division* of the larynx.

There is always an increase of the body temperature, subject, however, to great variations, and giving a curve similar to that of acute miliary tuberculosis (temperature curves were shown). Turning now to the differential diagnosis—the whole appearance of the disease is so characteristic that it is worth while to point out accurately the distinction from one disease only, viz., syphilis. To establish a differential diagnosis from diphtheria aphthæ, follicular angina, etc., would be superfluous, as these affections cannot be confounded with tuberculosis. The rare form of lupus is distinguished from tuberculosis by the size of the nodules, by the depth of the ulcers, the smaller amount of pain attending them, the concomitant symptoms, and so many other circumstances that it is scarcely possible to confound the diseases (*see* Homolle, *Des Scrophulides graves, Thèse de Paris*). It might be possible to confound it with the so-called scrofulous ulcers of the pharynx; but in the latter disease it is to be noticed that the ulcers are deeper, more sharply defined, and tend to have a longitudinal rather than a transverse direction; moreover, the yellow spots around them are seen to be genuine abscesses, and not merely gray or cheesy nodules.

That pharyngeal tuberculosis is easily confounded with syphilis is apparent from the circumstance that all Fränkel's cases, and many of those related by others, were probably regarded by the numerous practitioners who were first consulted as being syphilitic, and in one case at least treated accordingly. If to this error in diagnosis be due the rarity of pharyngeal tuberculosis, and the frequency of syphilitic ulcerations of the pharynx, and the custom of regarding all ulcerative processes in the pharynx as syphilitic, this certainly appears as an indication for giving a more elaborate answer to the question how tuberculosis is distinguished from syphilis.

(The question in the original is argued at length; the points may be summed up as follows:)

It is only in some cases of syphilitic ulceration that any real difficulty n the differential diagnosis can occur, for in either disease there may be swelling of lymphatic glands in various parts of the body; the ulceration may attack the tongue, lips, and cheeks; and in one of Fränkel's cases there was also swelling of one testicle, which might have created doubt as to the nature of the constitutional affection.

If the history of the case is not sufficient to establish the syphilitic or non-syphilitic character of the affection, a careful examination of the ulcers will almost certainly suffice to decide the point, for the mucous patches of the early stages of syphilis can hardly be confounded with the ubercular infiltration and ulceration above described. The ulcers of the pharynx which occur in the later stages of syphilis, besides being deep and sharply defined, tend to cicatrize and contract, and thus assume altogether a different appearance from that of the tubercular ulcers.

Tubercular ulceration of the pharynx almost always ends fatally within a few weeks or months. Treatment would seem to be unavailing, though, f course, supporting measures are indicated. Some relief to the pain is fforded by painting the throat daily with glycerole of morphia (Isamert); the local use of astringents has hitherto been of no service.

Death takes place from exhaustion, and not from any impediment to respiration in consequence of extension of the disease to the larynx.

To sum up: Miliary tuberculosis of the pharynx is a disease which attacks either apparently healthy persons, or those already affected with hthisis of other organs.

It deposits an eruption of gray nodules in the pharynx which leads to well-characterized lenticular ulcers, and is accompanied by entensive miliary tuberculosis. The patients generally die rapidly from exhaustion.

44. A man, about twenty-eight years of age, slipped while climbing nto a plum-tree, and fell, but, his feet catching in the branches, he re- ained hanging head downward. He made violent efforts to raise his ody so as to grasp the branch with his hands, but was unable to do so, nd remained in his uncomfortable position for an hour before help came. mmediately after the accident dyspnœa set in, and increased from day to ay. It was especially severe, and even bordered on suffocation, when the atient let his head fall forward; when he held his head erect, with the ain elevated, the symptoms were relieved, and his condition was bearable. e wore a stiff, high stock, in order to keep his head in this position. any physicians were consulted by him, but none could discover the cause

of the dyspnœa. Percussion and auscultation revealed nothing abnormal. Ten weeks after the accident the patient committed suicide. The autopsy revealed great enlargement of the space between the second and third tracheal rings, the stretched and elongated membrane being at the same time relaxed. When the head was flexed on the breast the lower part of the trachea telescoped the upper part, the third tracheal ring being forced inside the second, and in this way the suffocative attacks were produced.

45. Johnson's paper has a practical worth for the purposes of references, insomuch as he has collected, from all available sources, the records of the operation of thyrotomy published since Mackenzie's paper in 1873, which contained the details of only forty-eight cases. Johnson adds fifteen cases to the list, as follows: four reported by himself (two of these operations were upon the same patient, but the circumstances were such as to justify separate histories), nine by Navrati, one by Lefferts, and one by Böckel—which, added to the forty-eight tabulated by Mackenzie, make in all sixty-three recorded cases. In these fifteen cases only one has died; and in thirteen the voice has been restored, or at least not destroyed.

The detailed reports of his four cases are given in his paper. They are interesting, but contain nothing which adds to our knowledge of the subject, as far as the steps of the operation are concerned.

46. Mr. Lennox Browne advises strongly against excision of the thyroid, which he ranks as a highly-dangerous operation, from the fatality which has been shown to be associated with it even in such skilled hands as those of Dr. Watson. He finds that a much simpler procedure will be successful, cause the disappearance of the tumor, and at worst only leave a slight scar; and he gives six cases of his own in support of his statements. The tincture of iodine may be injected, as recommended by Lücke, of Bern. In some cases it produces absorption, and in others suppuration; when the seton is used it is left *in situ*, so as to produce very long suppuration. In one case, where the tumor involved the isthmus and left lobe of the thyroid, and was as large as an orange, injections of the tincture of iodine were practised three times on alternate days, about thirty drops being used. Suppuration was then invited by fomentations, and, when the abcess formed, two further injections were made into the side swellings. The discharge took place spontaneously, and continued for four weeks, pledgets of lint being introduced into the wound, so that it might heal from the bottom. About nine months afterward there was no sign either of tumor or scar. In another case, a young woman of twenty-two had a general fibrous enlargement of the thyroid. Swallowing had become difficult and breathing was embarrassed. An injection of iodine was made at the first visit. Great pain was occasioned, and the patient passed a sleepless night. On the next day a seton was introduced and retained one month, and the effect was markedly beneficial, free discharges ensuing, and the tumor diminishing in size most markedly. A month later all discharge had ceased; there was no thickening perceptible, and the cicatrices were mere points. Her general health had also much improved. Mr. Browne has obtained very little advantage from electrolysis in these cases. Of eight patients who were thus treated, one only obtained real benefit. As auxiliary to the treatment, he recommends the patients to finish up by a course of baths and waters at the Bromo-Iodine Spa of Woodhall. Mr. Browne says it is difficult to say in which class of cases iodine is to be preferred and in which the seton. When the tumor is substernal and causes dyspnœa, it is the extension of the disease behind the trachea and œsophagus that is the cause of the trouble. These bronchoceles are usually small, and are always fibrous. The cystic bronchocele rarely embarrasses the respiration.

48. In the above journal is an article abstracted form the *Journal de Médecine Belge.* Tordens remarks that spasm of the glottis is sometimes developed from hereditary influence, and often recurs in the same individual. On the other hand, some occasional causes which may give rise to it are of an avoidable nature. Thus, in certain cases, the cause is an irritation of the skin, the prick of a pin, the action of cold, worms in the intestine, teething, anger, or violent emotion, etc. We have seen their breaking out with an attack more serious than that of stridulous laryngitis or false croup, spasm of the glottis, accompanied by contraction of the muscles of respiration, and principally of the diaphragm; sometimes even general convulsions supervene. When we fear an attack, we must treat the verminous affection, lance the gums in teething infants, avoid all irritation of the skin, and as rickety and anæmic children are frequently attacked, must give them remedies suited to improve their general health. Lastly, antispasmodics, and principally bromide of potassium (seven and a half grains, or fifteen a day), are indicated under these circumstances. During the paroxysm, we should at once remove all clothing which may impede respiration and expose the little patient to the air, at the same time dashing cold water upon him. If the paroxysm be prolonged, we must use friction and sinapisms to the limbs. Bouchut advises chloroform, which often gives remarkable results. In the cases where respiration is long in returning, we must employ artificial respiration and electricity to the chest. Unfortunately, we can scarcely ever have time to apply all these means, and the proceeding proposed by Charon, and first extolled by Henriette, appears much more practical. According to that physician, inhalations of ammonia seemed almost always successful in combating the attack. He therefore advises mothers whose children are subject to spasm of the glottis always to carry a bottle of ammonia about with them. Charon cites the case of a physician's wife who followed this advice, and whose child was always rapidly brought round from attacks of spasm by this means, but one day she had not the bottle with her, and a fatal asphyxia occurred while the mother was searching for it.

ONTRIBUTED BY DRS. GEORGE R. CUTTER, EDWARD FRANKEL, AND E. H. BRADFORD.

SURGERY.

Preventive Trephining.—At the October 16th meeting of the Académie es Sciences, M. C. Sédillot spoke in favor of preventive trephining, in cases f fracture with displacement of the internal table, as the only means of reventing the usually fatal complications. He cited one hundred and six bservations; of these cases, seventy-seven were trephined, and twenty-ine were not. Nine of the operations were *preventive*, that is to say, erformed before the appearance of primary or consecutive symptoms. ixty-eight *curative* operations had the object of remedying grave complications, such as paralyses, loss of consciousness, and convulsion; of the urative operations, twenty-one were performed early, during the first five ays after the injuries, forty-seven late, after the fifteenth day. In the ne hundred and six cases, the external table was unfractured twenty-one imes, and, as the majority of patients at first presented few symptoms, he injuries were often considered slight. Those surgeons who, from fear f the dangers of trephining, have waited for the appearance of menacing omplications before resorting to the operation, might have saved a large number, for, of the twenty-nine cases with comminuted vitreous fractures, not trephined, twenty-eight died and one recovered; nine preventive trephinings gave six recoveries; sixty-eight curative trephinings twenty-four recoveries; twenty-one early trephinings eight recoveries, and forty-seven late trephinings fifteen recoveries. The mortality, therefore, was in proportion to the lateness of the operation. Two-thirds operated on as a preventive measure were saved, more than one-third by early trephining, and less than one-third by late trephining, and only one in twenty-nine when no operation was performed. As the diagnosis is important and difficult, the author observes that auscultatory percussion might be an efficient aid. The details of twelve cases are reported, of which the two following may be cited: 1. Wound of hairy scalp at the summit of the right parietal bone, from gunshot; injury judged of little importance; no accident for twenty-four days, then coma and death; external table found necrosed without fracture; stellate and depressed splinters of the vitreous table; vast abscess under the dura mater, having perforated the falx cerebri, and invaded the opposite hemisphere. 2. Fracture of left parietal by blow from hammer; depression five millimetres; no primary symptoms; patient trephined twelve hours after by Prof. Boeckel; extraction of one hundred splinters, detached from the vitreous table; recovery in six weeks.—*Lyon Méd.*, No. 45, 1876. E. F.

Chloral in Tetanus.—Dr. Agelastos, of Bucharest, reports two more cases of tetanus, though idiopathic, which were cured by the administration of chloral. The first patient, a baker, twenty-eight years old, entered the hospital with symptoms of tetanus, which had appeared after exposure to draught while in perspiration. At first, one grain of morphine was administered without producing sleep. Nothing but a little liquid could be swallowed. One drachm of chloral, with thirty drops of tincture of opium, was then given; after this dose the patient slept, and swallowed a pint of milk. The dose was increased on the following day, and the patient improved in every respect; but as soon as the dose was diminished the contractions and trismus reappeared. The largest dose given in one day was three drachms of chloral and four grains of opium; the latter was then discontinued, and the chloral given alone, of which the patient for ten days received two and a half drachms per diem, with the effect of producing complete calm. This quantity was diminished as the patient showed improvement, and he was discharged, cured, after two months. During his sickness he had received eighty-nine drachms of chloral. The second case was that of a child of five years, affected with idiopathic tetanus, cured by the administration of chloral; the largest quantity taken in one day was one scruple. The author observes that chloral given with opium is more efficacious, but produces constipation, loss of appetite, and cerebral congestion, while chloral given alone produces calm sleep, without loss of appetite or headache. In regard to the possibility of preventing tetanus, the author has for two years past always administered chloral in cases threatened by traumatic tetanus, and states that he has thus always prevented its occurrence.—*Gaz. Méd. de Paris*, No. 45, 1876.
E. F.

Depressed Fracture of the Skull.—M. Berger reported before the Société de Chirurgie a case of recovery from this lesion without trephining. A child thirteen years old was struck by a bolt falling from a great height. A contused wound of the scalp with a tolerably extensive depression resulted. Severe general convulsions followed, and then coma, with spasmodic contraction of the upper extremity and strabismus. As the condition improved, M. Berger decided not to trephine. In two days all cerebral symptoms had disappeared; the wound, which had been denuded, became covered with granulations, and patient recovered. The prognosis in injuries of the cranium in young subjects is more favorable than in adults, but M. Berger thinks expectant treatment is to be preferred, judging from recent statistics, particularly those of Dr. Bluhm, taken from 925 cases of trephining. The later the operation was deferred, the better the results, according to the figures given. For example, primary trephining gave 57.14 per 100 mortality; secondary trephining a mortality of 40 in 100; late trephining gave only 16 by deaths in 100.—*Gaz. Hebd.*, October 20, 1876.

M. Sédillot, however (*Acad. des Sciences Comptes Rendus*, October 12, November 12, 1874, tome lxxix.), has recorded an exactly opposite opinion. He considers trephining the only means of preventing complications which otherwise are almost inevitable and fatal in their result. He recently presented a table of 106 cases occurring in his own practice, and also from the publications of others (Chauvel, Gross, of Nancy, Cochu, T. & J. Boeckel, Schalk).

In these 106 cases 77 were trephined, 29 not. Nine operations of trephining were preventive, i. e., before the occurrence of complications appearing after the first day; 68 were curative, to relieve the complications of paralysis, loss of consciousness, convulsions, coma; 21 were done in the first five days after the injury, 47 at a later period. Of the 106 cases, there was no fracture of the outer table in 21 cases, and, as in most of the cases, there was at first little disturbance, and the injuries were regarded as slight.

In the 29 cases of splintered fractures, and not trephined, there were 28 deaths and 1 recovery; of the 77 trephined, 29 recovered, 48 died. Nine preventive trephinings gave 6 recoveries, 3 deaths; 68 curative operations, 24 recoveries, 44 deaths; of these the 21 done in the first five days gave 8 recoveries, 13 deaths; 47 done later gave 15 recoveries, 32 deaths.

The mortality was in proportion to the delay in trephining. Two-thirds of those operated on by preventive trephining were saved; more than one-third when operated on in the first five days; less than one-third when the operation was later. Only 1 in 29 survived in those cases where the trephine was not used.

Injection of Perchloride of Iron into an Aneurism of the Anterior Tibial Artery.—M. Denucé reports this case, which may serve more as an example of experimental investigation upon the human subject than for he establishment of a surgical precedent:

M. R., forty-five years old, strained the right foot. Three years previously, the result in June, 1874, was a small pulsating tumor on the anerior external surface of the foot, of the size of a large walnut, and preenting all the characteristics of an aneurism. Digital compression was ried, and afterward mechanical, but the injury to the skin thus caused obliged the abandonment of this method of treatment.

The injection of perchloride of iron was then tried. The anterior tibal artery and the arteria dorsalis pedis were compressed, and seven rops of perchloride of iron were injected into the centre of the tumor. Digital compression was removed ten minutes after the operation, but mechanical pressure was kept on for several days.

At the moment of the injection the patient felt a cramp in the toes, nd the extremity of the foot became suddenly red. These phenomena isappeared quickly, and there was no evidence of inflammation, and the neurism was cured. There was, however, a feebleness of the leg for a ong time, and the patient suffered shortly afterward from onychia of the reat-toe, which resulted in the loss of the nail.

The blush in the foot at the time of the injection suggests that some f the blood was altered by the penetration of the perchloride of iron into the capillary network at the extremity of the foot. M. Denucé considers that if the amount injected had been larger, a gangrene of greater or less extent would have resulted, and he therefore concludes that injections of perchloride of iron should only be made into aneurisms where compression could be applied both above and below the tumor, in order to stop the current of blood in the aneurismal sac.—*Journal des Sciences Méd. de Louvain*, February, 1876, p. 81. E. H. B.

A Peculiar Degeneration of the Cerebral Capillaries.—Neelsen's attention was called by Wagner to an alteration of the capillaries of the cortical substance of the brain. This alteration consists in a vitreous degeneration, always limited to small tracts of the vessels, causing for the most part lateral tumefactions and slight diminutions of the lumen of the capillaries. The nuclei are distinctly seen by the aid of carmine and hematoxylin, and appear wrinkled and deformed, as if dried. The vitreous substance of the altered sections resists the action of hydrochloric, sulphuric, and dilute acetic acid, and is colored yellow by nitric acid. It is rendered clear, without swelling, by caustic potassa, and resists putrefaction for a long time. It is intensely colored by platinum and gold.

The author considers this degeneration identical with the *ceruminous* alteration of Lubunoff, the *colloid* of Arndt, and the *vitreous* of Eppinger, degenerations which have been described by these authors as important anatomical discoveries in connection with paralytic dementia. Contrary to the opinions of the latter writers, however, our author can demonstrate these changes in individuals who have died from other diseases, and especially of phthisis. This degeneration is more rarely found in children, and may run its course without special clinical symptoms. In relation to the etiology, in view of the frequency with which this affection is found in old cachetic persons, dying of phthisis or cardiac diseases, the author is disposed to regard a sanguineous stasis in the brain from cardiac weakness, or mechanical impediment, as an occasional, though rare, cause.—*Il Novimento* and *Gazz. Med. Ital. Venete*, December, 1876. G. R. C.

On the Treatment of Ulcers of the Leg.—Prof. Von Mosetig reports as follows on this subject: The treatment of ulcers of the foot (of which seventy-four cases occurred) was as follows: Varicose ulcers, when unclean, were dressed with carbolized glycerine (one to ten), until the ulcer was transformed into a clean, suppurating wound; then fomentations with tepid water were made, and occasional stimulation with lunar caustic. The patients were compelled to maintain absolute rest in bed, and when discharged were advised to wear a bandage on the whole extremity. In gangrenous ulcers, equal parts of carbolic acid and alcohol were applied, or the ulcer cauterized with Canquoi's chloride-of-zinc ointment. Ulcers with steep and indurated margins were stimulated by pressure with straps of adhesive plaster, while serpiginous ulcers were treated with red-precipitate ointment, and iodide of potassium internally. When the ulcer was situated directly over the tibia, Faure's method of lateral incisions, usually two half-elliptical incisions through the skin down to the fascia, at a distance of two to three centimetres from the margin of the ulcer, and extending beyond it, was used. The author never plugs the fresh incisions with lint, as he has observed that, if carried down to the fascia, they begin to gape themselves, while the ulcer rapidly diminishes and cicatrizes. He prefers Faure's method to that of Nussbaum's entire circumcision, as in one case of the latter gangrene of circumcised skin resulted. He has never had favorable results from skin-grafting in ulcers of the leg. Though the transplanted pieces of skin attached themselves, they were often dissolved or ulcerated even during the treatment, but invariably as soon as the patient attempted to walk. E. F.

Scrotal Phimosis; Epispadias.—Bouteiller, in the *Mouvement Méd.*, No. 39, 1875, reports the case of a child, twenty-four hours old, who had not yet passed urine, and had a well-developed scrotum containing the testicles. No penis was to be seen, only a pin-hole opening occupying its site. On making deep pressure at this point, a resistant body, about the size of a small hazel-nut, was felt. The author made a T-shaped incision through which this body, a glans penis, split on its dorsal surface, could be pressed forward. No urethral opening could be detected, but the child could now pass its water in a stream. The child dying when eight months old, an examination showed that the lips of the wound had united with the penis at the base of the glans; here, also, was the urethral opening, which was imbedded in the dorsal furrow, between the corpora cavernosæ. The penis had a length of five centimetres. No abnormity found in the bladder.

E. F.

THEORY AND PRACTICE.

Accidents from the Cold Bath in Typhoid Fever.—In the Société Médicale des Hôpitaux at Paris, there has been recently an interesting discussion of the question of the applicability of cold baths in the treatment of typhoid fever.

Visceral hæmorrhages have been said to result from the cold-bath treatment. These hæmorrhages, however, are found to be much less frequent than has been supposed, as is made evident by an analysis of cases made by M. Féréol.

In two cases treated by the cold bath, there was copious epistaxis. In one of these, however, the epistaxis occurred before the use of the baths.

There were three cases of intestinal hæmorrhage under this treatment, and one of these ended fatally. These were severe cases. In other severe cases, tepid baths at 28° or 30° C. were substituted for cold baths. One case so treated died of intestinal hæmorrhages. A second died of hæmoptysis following a bath at a temperature of 28° C. A third was taken with an hæmoptysis after a cold bath; a tepid bath was substituted, but the hæmoptysis continued, and the patient died.

M. Féréol concludes from his experience that tepid baths have all the disadvantages of cold baths, without the advantages, as there is not such a diminution of the frequency of the pulse, or a fall in the temperature, after tepid as after cold baths. M. Liebermann's experience confirmed M. Féréol's opinion, having found that after tepid baths, lasting thirty or forty minutes, the fall in the temperature was not greater than from 1° to 3°.

M. Féréol observed, in eighty-three cases of typhoid fever treated with the cold bath, six cases where hæmoptysis occurred, four recovered, two died. The two latter, however, commenced to cough up blood before the bath had been used. In two hundred and thirty-four cases cited by M. Humbert Mollière, there was only one case of hæmoptysis.

M. Proust reports two cases of lobular pneumonia, complicating typhoid fever, which he considers due to the treatment of the cold bath. A double pleurisy, occurring in a case of typhoid, is also attributed to the same cause.

M. Liebermann has observed an unusual amount of laryngeal complications in patients suffering from typhoid fever and treated with the cold bath—more than in those treated in the ordinary way.

A more serious accident was referred to by M. Peter. He has collected five cases of syncope caused by the bath; three of these died in the bath. Although the casualties referred to may have been due to accidental causes, they certainly demand consideration before adopting unhesitatingly the cold-water treatment in typhoid fever. — *Gaz. Hebd.*, February 2, 1877. E. H. B.

Recurrent Typhoid Fever.—Malmsten and Wallis report (*Svensk. läk sällsk. förhandl.*) the case of a hospital-servant, twenty-four years of age, who had symptoms of fever early in December. Within two weeks he had so far recovered as to leave his bed. Five days later he again had fever, and soon presented symptoms of typhoid fever. He became worse, the temperature increased, and acute nephritis and pneumonia occurred. Death took place January 16th.

On *post-mortem* examination it was noticed that, in the three or four feet of the small intestine situated nearest the ileo-cœcal valve, the Peyerian patches and the solitary glands were unusually elevated above the surface, but, with the exception of those situated nearest the valve, they all presented the characters of a process of retrogression of long-previous occurrence. The Peyerian patches and the solitary glands in the lowermost portion of the ileum, one or two inches distant from the ileo-cœcal valve, together with the glands throughout the whole colon and rectum, presented ulcers, the bottoms of which were formed of the exposed submucous tissue, and their borders of the freely-floating, irregularly-eroded mucous membrane. There was no trace of a healing process in the ulcer. Throughout the whole of this portion of the intestine the mucous membrane was hyperæmic; this was most marked around the valve and in the ascending colon.

This case of relapsing typhoid fever possesses uncommon pathologico-anatomical interest. Long-past ulcerative processes in the colon are tolerably rare, and usually occur in connection with severe typhous processes in the ileum; but an ulcerative process which had extended so long as this, spreading over the whole colon and rectum, equivalent to the formation of a single localization of a relapse of typhoid fever, is a great rarity.—*Nordiskt Med. Arkiv*, 8de Band, 3je Höft. G. R. C.

OBSTETRICS.

Bacteria in an Abortive Ovum.—Dr. Haussmann (*Virch. Arch.*, Bd. 67) found a number of bacteria in the amniotic liquor, and also in the fluid from the pericardium and pleura of an abortive ovum of the fourth month, which had been removed without injury of the membranes. He found, at the same time, the same variety of bacteria in the vaginal mucus of the mother. The possibility being excluded of a spontaneous generation of the bacteria in the ovum, or of their immigration during the stay of the latter in the vagina, which, at the most, lasted but a minute, Dr. H. concludes that they were present in the ovum while it was in the uterus. As the mother was healthy, the bacteria did not enter the ovum with the blood-current through the vascular connection with the maternal tissues, but came from the vagina, where bacteria are always present, and which, during the protracted abortion, wandered up into the uterus, and thence into the ovum. Attention is called by this case to the danger of carrying vaginal mucus filled with bacteria to other mucous membranes, and especially to that of the uterus. This may readily take place during an examination. Many of those cases of infection which are communicated by the fingers or the use of instruments are due to the infecting vaginal mucus. A thorough washing out and disinfection of the vagina is, therefore, recommended before examinations or operations on the uterus. During parturition a preliminary disinfection of the vagina is equally important before making an examination.—*Hospitals-tidende*, No. 5, 1877.

G. R. C.

Miscellany.

The Medical Profession in the United States. — Under the above title the *Gazette Hebdomadaire* (January 12, 1877) has a *feuilleton* which is of unpleasant interest to Americans. We will quote a few paragraphs, and can commend the article as wholesome reading for both the profession and the general public:

"It is incredible that, in a country where intelligence is so general and diversified, persons are everywhere to be found able to gain the confidence of the public, to make ready followers, and by dishonorable means supplant educated and conscientious physicians. The number of quacks in England is considerable, but it is much greater in the United States. . . . Abortionists are nowhere so common, and make little attempt at secrecy. It almost appears as if, in a country where Puritanism ignores but tolerates prostitution, houses are protected where all the laws of morality are violated. It is a fact that these people, men and women, can only be brought to justice when the body of a victim can be seized.

"Medical education (in the United States) is more than defective, it is bad. The means of remedying the evils are to be sought in the voluntary action of medical colleges, in legislation, or in public opinion.

"Unfortunately, there exists a jealousy between the different schools, a rivalry which prevents united action.

"The public, which is chiefly interested in this matter, ooks on with perfect indifference. The publicity which charlatanism finds in the daily papers is one reason of this, as a community will never see the utility of reforms in medical education when the public journals encourage the speculative tricks of quacks, and when clergymen and others who are considered intelligent patronize patent medicines and add heir signatures to recommendations of their value."

The University Medical College.—The thirty-sixth annual commencement of the medical department of the University of the City of New York was held at the Academy of Music, February 20th, when one hundred and fifty-seven gentlemen received diplomas. The address to the graduates was delivered by Bishop Quintard. The Mott gold medal for the best anatomical preparation was conferred upon Mr. M. M. Johnson, of Connecticut, and the silver prize upon Mr. Alexander Dallas, of New York. Honorable mention for proficiency and superior excellence in this examination was made of the following gentlemen: H. C. Toal, F. A. Gillen, C. A. L. H. von Ramdohr, M. T. Scott, A. G. Paine, Jay Owens, L. Haupt, G. L. Krieger, F. W. Brown, H. H. Coleman, W. P. Bowen, H. T. Dawson, S. Koen, A. E. Prince, and W. E. Cladek.

Appointments, Honors, etc.—Dr. D. H. Kitchen, formerly chief of staff of Charity Hospital, has received the appointment of Superintendent of the Binghamton Inebriate Asylum.

Prof. Lister has been elected a Foreign Corresponding Member of the Société de Chirurgie de Paris. He has also been elected a Foreign Associate Fellow of the College of Physicians of Philadelphia. It is not improbable that Prof. Lister will be called to London as the late Sir William Fergusson's successor in King's College. Prof. Maas, of Breslau, has been elected to fill the chair of Prof. Czerny, Freiburg, Simon's successor in Heidelberg. Drs. Peacock and Basham have recently been the subjects of paralytic attacks.

Paget's Oration on John Hunter.—In the *Medical Times and Gazette* of February 17th will be found in full the Hunterian Oration, delivered at the Royal College of Surgeons, by Sir James Paget. It was an able and eloquent review of the life and labors of John Hunter, and an analysis of his methods of study and investigation. The orator dwelt especially on the almost superhuman energy that enabled Hunter, in the midst of a large and arduous surgical practice, to accomplish so vast an amount of scientific work, his museum containing nearly fourteen thousand specimens, all either prepared or closely studied by himself.

Bellevue Hospital Medical College.—The sixteenth annual commencement was held at the Academy of Music, the graduating class numbering one hundred and forty-seven. Dr. McCosh delivered the address to the graduates, and Elisha D. Leffingwell the valedictory. The following prizes were awarded: For the best report of clinic, to George Mingies, $50; for the best examination in obstetrics, between A. W. Rand and B. M. Disbrow, $50; for the best examination in physiology, George S. Conant, $50; for the best essay on psychology, A. R. Robinson, $50.

The Immediate Cure of Piles.—Dr. H. A. Reeves, in the *Lancet* of February 17th, describes a method by which, in eighteen cases, he has made a radical cure of piles by puncture with the actual cautery. Two or three punctures are made with the pointed cautery, and the bowels are kept quiet with morphine for a time. On the third or fourth day an enema is given, and at the end of a week the patients are discharged.

Death from Chloroform.—The *Lancet* of February 10th records the death, in the Peterborough Infirmary, of a man fifty-two years of age. The patient was placed under the influence of chloroform (two drachms in all being used) for the reduction of a strangulated inguinal hernia. It is the old story: the pulse and respiration suddenly ceased, and, although efforts at resuscitation were promptly employed, the man never rallied.

Effects of Water on the Skin.—Prof. Hebra, in the first two numbers of the *Wiener med. Woch.* for the present year, opposes the popular notion that frequent washing, either with cold or warm water, is always harmless and conducive to health. He believes that where water produces irritation or itching it may cause serious diseases of the skin, and that general ablutions, either cold or warm, do not serve in any way as prophylactics against diseases of the internal organs.

Human Milk for Sale.—It is stated by Dr. Edward Henderson, of Shanghai, that human milk can usually be obtained without difficulty in China. In Shanghai it costs about forty cents a pint. It is said that in some cities women may be seen milking their breasts into small basins in the streets. It is esteemed by the natives a nourishing food for consumptives and for the aged.

Reproduction of Max's "Anatomist."—A very faithful copy of the oil-painting by G. Max, entitled "The Anatomist," has been published, in the form of an etching, by Berendson, of this city, 48 Nassau Street. The painting is a striking one, and appeals directly to the professional taste. The same publisher intends to issue photographs of some of the most distinguished European physicians and surgeons.

A New French Medical Journal.—We have received the January and February numbers of the *Revue Mensuelle de Médecine et de Chirurgie*, edited by MM. Charcot, Chauveau, Ollier, Parrot, Verneuil, Lépine, and Nicaise, and published in Paris by Baillière & Co. The names of the editors are a sufficient guarantee of the character of the publication, and will insure it a favorable reception.

The German Surgical Society.—The sixth congress of this Society will be held in Berlin from the 4th to the 7th of the present month. Prof. von Langenbeck, the president, has made special efforts to insure a large exhibition of surgical instruments, apparatus, etc.

Puerperal Fever in Berlin.—A commission, with Prof. Schröder at its head, has been appointed by the Obstetrical Society of Berlin to deal with the subject of the etiology and prevention of puerperal fever in that city.

International Medical Congress.—The Swiss Federal Council has granted ten thousand francs for the printing of the protocols of the next International Congress, to be held in Geneva.

The New York Hospital.—The new building, which is a perfect Alhambra of elegance, was formally opened by a public reception on the 16th ult. An appropriate and eloquent address was delivered on the occasion by Prof. Van Buren.

Surplus Material.—Much interesting material already in type, and intended for the present issue, is unavoidably omitted, but will appear in the May number.

The Chemistry of Peritoneal Effusions.—In a recent communication to the Académie de Médecine, M. Méhu described the results of some investigations into the chemical composition of various fluid effusions into the peritoneal cavity. He found that ascitic liquids contain the same organic elements as the serum of the blood, the proportion of albuminous matter, however, varying largely, but never exceeding that which is contained in an equal weight of blood-serum. The liquids are generally alkaline to test-paper. Of two hundred liquids examined, the author met only one which had an acid reaction, and it possessed special properties. The mixture of fibrin and "serin" contained in ascites is coagulated by acetic acid, nitric acid, bichloride of mercury, and by sulphate of magnesia, just as is the serum of blood, pleuritic liquid, and the contents of a hydrocele. The solid matter contained in one kilogramme of ascitic liquid never exceeds seventy grammes or falls below ourteen grammes. Thus the proportion of organic matters may be the same as that of an equal volume of blood-serum, or it may be only the tenth part of this. The quantity of norganic salts is subject to slight variations, being generally .9 grammes in each kilogramme of liquid. M. Méhu has ound that liquids containing only a smaller quantity of solid onstituent are reformed more quickly than those which conain a larger quantity, and in general the prognosis is worse n cases in which the fluid contains little than in those in which it contains much solid. It was found that the liquid f an ovarian cyst contained a large quantity of solid matter, nd the ascitic effusion from solid tumors pressing on the portal vein contained a larger quantity than those which reulted from disease or general dropsy. Almost all the liquids ue to cancerous tumors had an icteric tint, and contained ile, and this the author noticed also in cases of cirrhosis of he liver. He believed that in many, although not in all, ases, the chemical analysis of the liquid is evidence of its rigin in an ovarian cyst, or in the peritoneal cavity.—*Lancet.*

The Late Dr. Gurdon Buck.—At a meeting of the Medical Board of the Roosevelt Hospital, held on March 7, 1877, the following resolutions were unanimously adopted:

Whereas, The recent death of Dr. Gurdon Buck, the Senior Consulting Surgeon of the Hospital, though not unexpected, severs a connection of many years' duration to most of his colleagues: therefore, be it

Resolved, That we tender to the family our earnest sympathy with them in the great affliction which has come upon them; and also that we express, in this imperfect way, our appreciation of the high professional aims, the life-long devotion, and the disinterested benevolence, shown by our late associate in his distinguished career of nearly half a century.

Resolved, That the Secretary incorporate in the minutes of the Board the preceding preamble and resolutions, and publish the same in the medical journals of this city.

T. M. Markoe, *President*.

Robert Watts, *Secretary*.

Award to Messrs. Billings, Clapp & Co., Boston.—The undersigned, having examined the products herein described, respectfully recommends the same to the United States Centennial Commission for award, for the following reasons, namely:

A very fine display of chemicals, especially carbolic acid, propylamine (trimethylamine), chloride of propylamine, and also of pharmaceutical chemicals, such as citrates of iron and quinia, citrates of iron and manganese, citrates of bismuth and ammonium, pyrophosphate of iron, bromide of potassium, bromide of ammonium, chromic acid, valerianic acid, and many others. Commended for fine display and excellence of chemicals.

F. A. Genth.
(Signature of the Judge.)

Approval of Group of Judges: J. Lawrence Smith, P. De Wilde, E. Paterno, F. Kuhlman, Dr. von Wagner, Charles A. Joy, J. W. Mallet.

Donation for a Hospital in Vermont.—Miss Fletcher, of Burlington, Vt., has recently given $75,000 for the building of a hospital, and $100,000 for the endowment of the same. The hospital will be the first institution of the kind in the State, and will give an opportunity to students in the medical department of the University of Vermont for clinical study.—*Boston Medical and Surgical Journal.*

Army Intelligence.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 14 *to March* 13, 1877.

Cooper, George E., Assistant Medical Purveyor.—Relieved from duty in Department of California, and to relieve Surgeon Robert Murray of the charge of the Medical Purveying Depot in San Francisco, Cal. S. O. 40, A. G. O., February 21, 1877.

Greenleaf, C. R., Surgeon.—Assigned to temporary duty in the office of the Medical Director of the Department. S. O. 40, Department of the Gulf, March 6, 1877.

Jaquett, G. P., Assistant Surgeon.—Granted leave of absence for one month on surgeon's certificate of disability. S. O. 34, Department of the South, February 15, 1877.

Gardner, W. H., Assistant Surgeon.—Assigned to duty at Greenville, S. C. S. O. 36, Department of the South, February 17, 1877.

Bentley, E., Assistant Surgeon.—Assigned to temporary duty with Sixteenth Infantry, New Orleans, La. S. O. 31, Department of the Gulf, February 20, 1877.

Byrne, C. B., Assistant Surgeon.—Assigned to duty at Fort Duncan, Texas. S. O. 40, Department of Texas, March 2, 1877.

Paulding, H. O., Assistant Surgeon.—Assigned to duty with battalion Second Cavalry in the field. S. O. 24, C. S., Department of Dakota.

Brown, P. R., Assistant Surgeon.—Assigned to duty with battalion Second Cavalry in the field. S. O. 24, C. S. Department of Dakota.

Comegys, E. T., Assistant Surgeon.—To rejoin his proper station, San Felipe, Texas. S. O. 26, Department of Texas, February 8, 1877.

Shannon, W. C., Assistant Surgeon.—Assigned to temporary duty at Fort Clark, Texas. S. O. 40, C. S., Department of Texas.

Gardner, E. F., Assistant Surgeon.—To report to the commanding general, Department of Dakota, for assignment to duty. S. O. 41, A. G. O., February 23, 1877.

Shufeldt, R. W., Assistant Surgeon.—To report to the commanding general, Department of the Platte, for assignment to duty. S. O. 41, C. S., A. G. O.

Perley, H. O., Assistant Surgeon.—To report to the commanding general, Department of Dakota, for assignment to duty. S. O. 41, C. S., A. G. O.

Bedal, S. S., Assistant Surgeon.—Dismissed the service. G. C. M. O. No. 18, A. G. O., February 10, 1877.

Obituary.

Prof. Charles E. Buckingham died at his residence in this city on Monday, February 19th, at the age of nearly fifty-six years. Graduating as Bachelor of Arts at Harvard College in 1840, and as Doctor of Medicine in 1844, he entered at once upon the practice of his profession, and, without other advantages than his own ability and industry, soon laid the foundation of a steadily-increasing reputation. From the first he enjoyed in an unusual degree the respect and affection of his patients, who appreciated his frank sincerity and unselfish devotion to their welfare. His relations with his professional brethren were marked by the independence and candor with which he formed and stated his own opinions, but also by his respectful consideration for those of others, and by a generous regard for men who were his juniors.

Appreciation of Dr. Buckingham's professional abilities was shown by his appointment as one of the surgeons and afterward as one of the consulting physicians of the City Hospital, and by his election as Adjunct Professor of the Theory and Practice of Medicine, and, in 1868, as Professor of Obstetrics and Medical Jurisprudence, at Harvard College.—*Boston Medical and Surgical Journal.*

The deaths are announced of two eminent German *savants*—Prof. Poggendorff, who occupied the Chair of Physics in the University of Berlin, and whose researches in magnetism and electricity are of great value; and Prof. Hofmeister, the botanist, of the University of Tübingen.

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Original Communications.

ART. I.—*Exsection of the Hip-Joint.* By C. T. POORE, M. D., Surgeon to St. Mary's Free Hospital for Children, and Charity Hospital, New York.

THE following cases are published as a contribution to the study of exsection of the hip-joint in an advanced stage of the disease:

CASE I.—Martin G., aged fourteen years, was admitted into St. Mary's Free Hospital for Children, May 5, 1874, with the following history: Six years ago he fell upon the ice, striking on his left knee, having his leg in a flexed position. This was immediately followed by pain about the hip-joint.

After some time abscesses formed and were opened, so that at the time of admission there are many sinuses discharging pus in the upper part of the thigh, and gluteal region. The first abscess formed and opened on the inner aspect of the thigh near the perinæum.

On examination the patient is rather pale, the left thigh is flexed on the abdomen and adducted. There are four fistulous openings, one on the inner aspect of the thigh, one over the transverse process of the lower lumbar vertebræ, two on the antero-lateral aspect of the thigh, and one above Poupart's ligament. Dead bone can be detected through most of these sinuses. He has some pain at night. There is no albumen in his urine. Appetite good. Is taking cod-liver oil and iron.

On May 30th, Drs. Watts and Mason assisting, the patient was etherized, and the head of the femur removed, the bone being divided just above the trochanter minor. The shaft of the femur at this point was perfectly healthy. The wound was stuffed with lint and extension applied.

The head of the bone was found much eroded, especially at its inferior part, and the acetabulum was extensively diseased and perforated.

The patient did well, and the wound was closed by the first of September, except a small sinus, from which there is a thin, watery discharge; no exposed bone can be detected. A long splint was applied, and patient allowed to go about. He was discharged November 11, 1873, wearing a shoe with a high sole. He can bear his whole weight on the limb, and has considerable motion at the hip-joint. He walks without a crutch. All the sinuses have closed.

Remarks.—It will be noticed that in this case the disease was confined to the bones immediately forming the joint; that the shaft of the femur at the point of section was perfectly healthy; that there was a sinus *above* Poupart's ligament, and that the acetabulum was *perforated.* Also, that the first abscess opened on the *inner* surface of the thigh near the perinæum, and that the *head* of the bone showed most disease at its *inferior part.*

Case II.—John H., aged six years, was admitted into St. Mary's Hospital, January 10, 1874. He has had disease of the left hip-joint for two years, following a fall. He has been treated by extension by means of a weight and pulley. About one year before admission an abscess formed on the anterior aspect of the left thigh, and was freely opened; later, another formed on its inner aspect near the perinæum. He walks with a crutch, and suffers considerable pain. On examination sinuses are found as above, the discharge from which is considerable. No exposed bone can be detected, nor is there any crepitus on motion at the joint, even when the head of the bone is crowded in. Shortening, three-quarters of an inch.

His general condition is poor. There is no albumen in his urine. He was put upon a good diet, and took cod-liver oil and iron. Under this treatment he improved.

A short time ago dead bone was found about the joint, and to-day he was etherized, and the joint excised, Drs. Watts and Mason assisting. The head and neck of the bone were found much eroded, and the upper portion of the acetabulum eaten away. There was no perforation. Section was made above the trochanter minor. The bone at this point was soft and discolored. The limb was placed in a splint extending down below the knee and embracing the pelvis, and extension applied. The wound healed, with the exception of a sinus in the line of incision, through which dead bone can be felt.

Early in the fall he was up and about the ward, wearing a boot with a high sole, and was able to bear considerable weight on the limb. In December the glands in the groin became affected with caseous degeneration and suppurated. After enucleation the wound healed. In February, 1876, the discharge from the parts about the joint continuing, the line of incision was reopened, and the end of the femur exposed. It was found denuded of periosteum, carious, the medullary cavity enlarged, the bone of a dirty leaden color, and the end rough and irregular. On crowding the shaft upward the periosteum was found detached as far as examined (three inches), and the bone in the same diseased condition. About an inch or more was removed, the cut section showing the same unhealthy condition of the central portion as at point of first section. It was evident that the disease involved the greater portion of the shaft. The wound healed, with the exception of a small sinus. The patient was discharged May 30, 1876. He was able to walk with the aid of a crutch. He suffers no pain. Shortening, two inches. He has enlargement of the liver.

Patient presented himself at the hospital, December 26, 1876. His general condition is about the same as when he left. He still uses a crutch, and complains of some pain about the hip-joint on pressure. The sinus still discharges a little, and there is dead bone.

Remarks.—This was a case of long duration. The disease was confined chiefly to the head of the bone, the acetabulum being only eroded on its upper surface. The shaft of the femur was *soft* and *discolored* at the point of section at the time of the operation. The wound healed, with the exception of a sinus communicating with diseased bone. After some time the line of incision was opened. The periosteum was *found retracted* from the end of the bone, which was much *eroded.* Attempt was made to remove the diseased portion of the shaft, but, after exposing it for about three inches, it was still found to be of a *dirty color*, the *periosteum* but *loosely attached*, and on section the bone was *soft*, and the *medullary cavity* showing the same diseased condition as at point of first section. There did not appear to be any pus between the periosteum and the bone, nor had there been any attempt at the formation of an involucrum. Notwithstanding the amount of disease in the joint, no crepitus could be detected on account of the granulations in the acetabulum.

Case III.—Willie C., two and a half years old, was admitted into St. Mary's Free Hospital, December 1, 1873, with the following history: About four months before being brought to the hospital he fell down-stairs, after which his mother noticed that he did not attempt to walk; he complained of pain on any motion of the right limb; he soon became restless at night and cried out in his sleep. At the time of his admission is pale, and his appetite poor. On examination there is found considerable swelling of the tissues about the right hip-joint; the limb is flexed, and rotated inward. He complains of pain on pressure over the joint, and upon any motion of the limb. He had extension applied, and was ordered iron, and to have hot water applied to the joint twice a day.

After some weeks the tissues about the joint broke down, and an abscess formed and was opened. His general condition did not improve; the joint continued very painful, and his sleep at night was disturbed.

In April, 1874, the joint was excised; the head of the bone was extensively diseased, the acetabulum but slightly affected. Section was made just above the trochanter minor.

The bone looked perfectly healthy at point of section; quite a large piece of fibrous tissue above the joint was united to the soft parts on the shaft of the femur. I was assisted at the operation by Drs. Watts and Mason. He was relieved from all pain; rested better the night after the operation than he had done since his admission. He improved for a short time, but soon there was bagging of pus, which it was impossible to prevent. He soon developed disease of the lungs, and died October 14, 1874.

On *post-mortem* examination the upper end of the femur was found rough and carious. The shaft was denuded on inner aspect for about two inches below the point of section, being the track of an abscess which extended from the acetabulum down on the inner aspect of the thigh to its middle. The end of the femur, which was enlarged, is firmly held in the cavity of the acetabulum. There is an exostosis on the femur corresponding to the lower border of the acetabulum. The bone is not denuded of periosteum, except at the above-mentioned point. The acetabulum was not perforated, but extensively diseased. The band of fibrous tissue which was united to the soft parts on the femur was evident as a strong band closing up the joint-cavity.

Remarks.—It will be noticed that the shaft of the femur was *healthy* at the point of section; that the end of the bone at the *post-mortem* examination was found *enlarged;* that the periosteum was *not detached*, and that there were osteophytes on the surface of the bone. I think that joining the shaft to the parts above by the piece of fibrous tissue was a mistake, as it tended to close up the joint-cavity and prevented the free discharge of pus. I do not know whether it had any influence on the result, but it certainly was not a gain.

Case IV.—Amanda G., aged three and a half years, was admitted into St. Mary's Hospital, March 12, 1875, with the following history: Eighteen months ago she complained of pain in her right foot, and walked with a limp for a few days, when she refused to walk at all. She was treated by extension, but did not improve. Six months ago an abscess appeared on the external aspect of the thigh, and opened about three inches below the trochanter; this has continued to discharge profusely ever since. Her mother can assign no cause for the trouble. On examination, there is found a sinus as above, from which there is a profuse discharge of healthy-looking pus. Both limbs are plump, and no difference in their size can be detected; there is no pain along the shaft of the femur on pressure. The right thigh is flexed somewhat on the abdomen. Crepitus can be detected by crowding the head of the bone inward; no exposed bone can be found. Patient is a blonde, and seems to be in good condition; appetite fair. Extension applied.

April 21, 1875.—Patient was to-day etherized, and, assisted by Dr. Watts, I made the usual incision over the trochanter, and exposed the bone. In attempting to throw the head of the bone out of the acetabulum the femur was fractured at the junction of the diaphysis with the epiphysis, just above the knee-joint. The head of the bone was removed from the acetabulum after section, just above trochanter minor. On examination of the cut end of the bone, it was found to be soft, discolored, the periosteum being easily separated, and on crowding the end of the bone up in order to see the extent of the disease, the same condition was found. It remained either to amputate at the hip-joint, or to remove the whole shaft of the femur: as the patient was apparently in good condition, the latter was decided upon. This was easily done, the whole shaft being drawn by traction through the original incision. There was no hæmorrhage, nor was the periosteum attached at any point. The fracture was found to have taken place obliquely from within outward and from behind forward, leaving a small portion of the external condyle attached to the epiphysis, but dead. The acetabulum was perforated; the upper portion of the wound was brought together with suture, leaving a sufficient opening for the discharge; no involucrum had formed. The limb was placed between sand pillows, and extension (four pounds) applied. 8 P. M., patient comfortable, does not complain of any pain; pulse 128 and good; temperature 100.5°.

22*d*.—Comfortable; temperature 100.5°, pulse 136, A. M.; temperature 100.5°, pulse 142, P. M.

23d.—Wound dressed; no pain nor swelling; pulse 120, temperature 100.2°, A. M.; pulse 136, temperature 100.2°, P. M.

24th.—Discharge from cavity of periosteum free and considerable; appetite good; quinine gr. ij every three hours; plenty of milk and eggs; pulse 104, temperature 98.5°, A. M.; pulse 100, temperature 100.2°, P. M.

25th.—Doing well, discharge not any more profuse than before the operation; appetite good; pulse 116, temperature 98.7°, A. M.; pulse 120, temperature 101.8°, P. M.

26th.—Seems brighter, takes her nourishment well; no pain; wound looks well; pulse 116, temperature 99.8°, A. M.; pulse 140, temperature 100.8°, P. M.

This evening her face was noticed to be swollen on the left side, but she made no complaint until 11.30 P. M., at which time there was found some swelling in the left side of the mouth on either side of the alveolar process of superior maxilla; there was no tenderness. She can open and shut her mouth freely; there is also some swelling on the cheek corresponding to the position of the swelling in the mouth. Ordered tr. ferri chlor. ♏x every three hours. She has had no chill; temperature 103°, pulse 140.

27th.—Pulse 128, temperature 101.5°, A. M.; pulse 116, temperature 99°, P. M.

28th.—The swelling on the side of face has increased, the skin looks glossy, no pain on pressure. On examining mouth the first and second molar teeth are found loose, the second carious; thinking that this might be the cause of the trouble, they were removed. Pulse 100, temperature 99.2°, A. M.; pulse 120, temperature 101°, P. M.

29th.—Swelling of face more marked; still nothing can be found to account for the trouble. Appetite good, wound discharging freely, no bagging, pus perfectly healthy looking. The edges of the wound are beginning to cicatrize; they look perfectly healthy. Pulse 118, temperature 99.8°, A. M.; pulse 128, temperature 111°, P. M.

30th.—Pulse 136, temperature 99.5°, A. M.; pulse 132, temperature 102.5°, P. M.

May 1st.—Pulse 140, temperature 102.5°, A. M.; pulse 144, temperature 102°, P. M.

2*d.*—Pulse 124, temperature 100°, A. M.; pulse 140, temperature 101.2, P. M.

3*d.*—Pulse 128, temperature 100.2°, A. M.; pulse 140, temperature 100.2°, P. M.

Since last note, patient has continued in about the same condition, with the exception that the swelling of the face is more marked, so as to close the left eye; breath offensive. On examining the mouth to-day there was found a slough of the inner portion of the cheek, just where the mucous membrane is reflected off from the gums. The finger can be passed through this opening, and carried all over the external surface of the superior maxilla, which is denuded of periosteum, and dead. This cavity is syringed out with carbolic acid and water. The general condition of patient about the same; the wound looks well; the skin under the eye and a little below the outer angle of the lid looks thin and discolored. Ordered whiskey, ℥ iij.

4*th.*—Breath very offensive; cavity syringed out; the wound still looks well, but perhaps the granulations are not as bright. Pulse 140, temperature 100.5°, A. M.; pulse 148, temperature 100.9°, P. M.

5*th.*—Face is no better; breath offensive; respirations rapid; takes her nourishment well. The finger can now be passed back behind the superior maxilla into the spheno-maxillary fossa. Pulse inclined to be weak and rather sharp. A small opening has formed on her cheek about one inch below the outer canthus of eye. Pulse 124, temperature 100.5°, A. M.; pulse 120, temperature 101°, P. M.

6*th.*—Considerable sloughy tissue removed through the opening in cheek; cavity disinfected; wound in thigh looks badly, but discharge healthy; respiration 28. Pulse 140, temperature 100.2°, A. M.; pulse 140, temperature 100.5°, P. M.

7*th.*—No change; more tissue removed from cheek. Pulse 148, temperature 101°, A. M.; pulse 140, temperature 100.9°, P. M.

8*th.*—Pulse 140, temperature 99.5°, A. M. At 10 this morning she seemed brighter; called for some milk; voice strong. On going to her she seemed to have some difficulty in breathing, and immediately died.

Post Mortem.—Only the limb examined. The whole of the periosteum was removed, including the epiphysis. The knee-joint was perfectly healthy. The limb is much stiffer than at time of operation. There is found a deposit of bone about three inches long, and varying in width not anywhere more than one-quarter of an inch. The epiphysis is perfectly healthy. No other part examined.

Remarks.—It seems strange that there should have been so much disease with so few symptoms. There was no tenderness over the femur on pressure, and not much about the hip-joint. From the fact that the acetabulum was so extensively diseased and perforated, the disease must have begun in the joint, and extended to the shaft. The occurrence of disease of the superior maxilla, with extensive sloughing of the periosteum, I am unable to assign any cause for. The range of temperature, absence of chill and sweating, the general condition of the patient, the healthy state of the wound until two days before death, and the absence of any approach to a typhoid condition, would seem to negative the idea of pyæmia. A temperature of 99.5° just before death does not seem compatible with the supposition that she was suffering from purulent infection.

Case V.—Katy M., aged six years, was admitted into St. Mary's Hospital for Children, January 5, 1876. Had been suffering from disease of left hip-joint for two years. She first complained of pain in the knee, and after two months began to limp, and then almost immediately ceased to walk. Six months later an abscess opened on the anterior aspect of the thigh. Three other openings formed before the date of admission. When examined, she showed all the symptoms of hip-disease in the third stage. Joint painful; patient cries out with pain at night, and cannot bear to be moved. The left thigh is flexed on the abdomen; there is considerable swelling about nates; her general condition is poor; no albumen in urine; ordered iron and extension.

A large abscess was aspirated January 12th, and again on the 30th of January and 1st of February.

As the patient seemed to be losing ground from the pain nd profuse discharge, the joint was excised February 4th—

present, Drs. Peters and Watts—the bone being divided just above the trochanter minor. The head of the femur had entirely disappeared, with the exception of a long spike extending into the joint-cavity, which was filled with loose fragments. The bone, at the point of section, was soft and discolored. There was an abscess pointing above Poupart's ligament. The acetabulum was perforated, readily admitting the finger. Patient was placed in a wire cuirass.

She rapidly improved after the operation, although the discharge continued profuse. In March the upper half of the thigh became swollen and looked glossy, and the deep tissue seemed thickened.

March 20th.—The upper portion of the femur, as felt through the wound, is denuded and thinned. How far it extends it is impossible to say. Her general condition has greatly improved. Her temperature (evening) varies from 100° to 101°.

June 10th.—She is to-day etherized, and the end of the bone is exposed. It is found soft and dark-colored; the periosteum separated, and the bone carious. About one and a half inch was removed. There is disease farther down. General condition continues good.

January 9, 1877.—She is up and about; the parts about the joint are thickened, and there is considerable stiffness; dead bone can be detected, which seems to be the end of the femur. There is no pain about the parts on crowding the bone up. There is a sinus leading down to the diseased shaft, from which there is considerable discharge. General nutrition of the limb good; it is as large as the other. No tenderness along the course of the femur. The liver is enlarged.

Remarks.—It will be noticed that the disease in this case was at an advanced stage; that there was an abscess pointing *above* Poupart's ligament, and that the *acetabulum* was *perforated;* that the femur at the point of section was *soft* and *discolored*, and that at a subsequent period the wound was opened, and an attempt made to remove the diseased portion of the femur; but the disease was found to extend too far down; that the *periosteum* was *not intimately attached* to the bone, to the limit of the portion of the bone examined, and that on section the same appearance of the shaft was found as at point of first section. The *end* of the bone was *eroded.*

Case VI.—James C., fifteen years of age, was admitted into St. Mary's Hospital for Children, March 14, 1876. He gives the following history: Three years ago he had frequent falls, followed by limping and pain in right knee; he was in a hospital for two and a half years, during which time quite a number of abscesses formed and opened spontaneously. At the time of his admission the right thigh is flexed, shortened, and inverted; the knee-joint is also flexed and stiff. He suffers much pain, so that he is confined to the bed most of the time; he lies in bed, propped up with pillows; he has not been able to lie down for two years. There are four sinuses about the joint, through most of which dead bone can be felt. There is considerable discharge. Patient is thin and pale; appetite poor; liver enlarged. There is some albumen in his urine, but no casts can be found.

On May 21st the joint was excised—present, Drs. Peters and Watts. The head of the bone was found lying in the cavity of the acetabulum in pieces; the neck was also splintered; the bone was divided below the trochanter minor; the shaft was found extensively diseased; the bone was soft, thin, dark-colored, and the medullary cavity enlarged, so as to easily admit the finger for two or more inches; the shaft was divided again lower down; the periosteum was loose; the condition of the bone at the point of second section showed the same diseased condition. The acetabulum was not perforated, and but slightly diseased.

Wound brought together in part, and patient placed in a cuirass, with extension so as to bring the knee down.

In July all the wound had closed except a sinus in the middle of the line of incision, through which the denuded end of the femur can be felt; the discharge is very slight.

December 14th.—The patient has been about the ward for some months on crutches. He has been troubled with excessive œdema of the whole limb, which bandaging has relieved. To-day he has a high sole on his shoe. He can not bear much weight upon the limb on account of his knee giving away. There is no pain about the hip-joint, and he has some fair amount of flexion and extension. There has been no albumen since the operation.

Remarks.—It will be noted that there was extensive disease of the *shaft* of the femur; that it was of a *dark color*, and *soft;* that the *periosteum* was not *intimately attached* to it; that the *medullary* cavity was *enlarged;* that on making a second section the same diseased condition of the bone was found; that there was no sinus or abscess above Poupart's ligament; and that the acetabulum was *not* perforated. The occurrence of albumen is worthy of note, as well as the enlargement of the liver.

Case VII.—May F., three years of age, was brought to St. Mary's Free Hospital for Children, March 25, 1875. Two months previous she had a fall while on board a steamer, and, when she arrived in New York, was lame. She dragged the toes of the left foot, and complained of pain in her knee. On admission she presented the symptoms of disease of the left hip-joint; tenderness, lordosis, and swelling. There is a spot of rupia about the size of a silver quarter of a dollar on her forehead. She is pale, of a blonde complexion. She was put on iron, had extension applied, and hot water to the joint.

Swelling and tenderness disappeared, and in July a long splint was applied, and she was allowed to go about the ward. She has had several attacks of eczema under the plaster, so that at times it had to be removed. She has also had attacks of pemphigus over her whole body, but most marked on the palms of her hands and soles of her feet. In December, 1875, an abscess formed on the anterior aspect of thigh, just below Poupart's ligament, outside of the vessels; this was aspirated, and about an ounce of pus obtained; it seemed superficial, and I do not think it communicated with the joint. She was about again in a few weeks. In the latter part of March, 1876, the posterior aspect of the thigh (upper portion) was found to be swollen, and upon examination fluctuation was evident. She had complained of no pain, and the abscess was only accidentally discovered. This was aspirated on the 23d and again on the 26th. There then appeared some swelling on the anterior aspect of the thigh, below position of the former abscess; the fluctuation seems deep. On the 29th the abscess on the posterior aspect of thigh was freely opened, as aspiration did not seem to relieve it sufficiently. Patient was feverish; tongue coated.

April 15*th*.—Abscess opened on anterior aspect of thigh. There is a communication between the two abscesses.

June 30*th*.—Patient has been losing ground; abscess discharging profusely; the pus does not seem to come from the joint; a probe passed into either opening seems to pass toward the inner and deeper portions of the thigh.

September 15*th*.—On account of the hot weather, nothing has been done. She has improved somewhat since the first of the month. There is some bony crepitus in the joint. To-day she was placed under ether (present, Drs. Peters, Watts, and Yale); dead bone can be detected on the inner aspect of the femur, about an inch and a half below the joint. There are two openings on the postero-lateral portion of the thigh, which are united by a free incision, so that the finger can be made to enter the joint, which is found diseased. The soft parts were separated from the bone, and the head easily thrown out. It was then found that the inner aspect of the shaft anterior to the trochanter minor was extensively eroded, so that only a thin shell of bone was left, corresponding to the outer aspect of the femur. The head had nearly disappeared, and the cavity of the acetabulum was filled with loose pieces of bone, and was extensively diseased, but not perforated. The shaft was divided below the point of disease, when after section the bone seemed healthy. The upper and outer edge of the acetabulum was most diseased, and a portion removed; but, on account of the condition of the patient, it was thought best to desist from any further gouging of bone. There was an extensive abscess on the inner side of the ileum, which was pointing just within the crest. Whiskey, etc.

26*th*.—Passed a comfortable night; put into wire cuirass to-day; made no complaint of pain. Abscess near crest of ileum open to-day.

October 3*d*.—Wound cicatrizing; discharge moderate spicula of bone discharged.

5*th*.—Drainage-tube inserted.

On probing, dead bone is found through the opening near crest of ileum, situated about the rim of the pelvis.

December 16*th.*—Wound does not close; discharge moderate; no bagging; patient's general condition good; she suffers no pain.

January 16, 1877.—The discharge has been increasing for some days. To-day etherized patient in order to make a thorough examination of the parts. The end of the femur is found denuded, and the edge of the bone irregular. The compact tissue has not been thinned as much as in the other cases. The bone about the acetabulum is extensively diseased. The whole bone from the anterior-superior spine of the ileum down to the ischium seems to be in a carious condition. The bone is soft, so that it can be scraped off with the finger-nail; a considerable portion was removed with forceps and rongeur. A piece of bone about the size of a filbert was found loose near the tuberosity of the ischium. An opening was made so as to afford a free escape of pus from the diseased bone.

On section of the portion of bone removed, it was found affected with articular osteitis. The cartilage had disappeared, and but a small stump of the neck remained. The line of junction between the shaft and the trochanter major was diseased, and a portion of the cartilaginous trochanter was loose. The disease seems to have extended down the centre of the bone, and to have entirely destroyed the whole inner surface of the compact tissue of the shaft just anterior to the trochanter minor. The compact tissue below the trochanter major was very thin, and had a worm-eaten appearance.

Remarks.—It is probable that the disease in this case began in the head of the bone as an articular osteitis, and that it extended down the shaft. The existence of hereditary syphilis is rendered probable by the rupia and pemphigus on the feet and hands. There was an abscess above Poupart's ligament, but *no* perforation of the acetabulum. There was disease of the rim of the pelvis.

In looking over the histories of these seven cases, it will be noticed that they were all in an advanced stage of the disease; that from the condition of the bone a cure by means of rest and mechanical support was impossible; and that, unless relief from the pain and irritation was afforded, a speedily fatal termination was inevitable. Exsection of the joint afforded a chance, and, even if not successful in giving a sound limb, afforded immediate relief from all pain, and made what remained of life comfortable.

In four cases the shaft of the femur was diseased below the point of section, namely, in Cases II., IV., V., and VI. In Case IV. the whole diaphysis was removed, while in two cases, Nos. II. and V., after some months the wound was opened and a further section made of the bone. Notwithstanding the unhealthy condition of the shaft in Cases II., IV., V., VI., the wounds healed, but with a sinus leading down to the end of the diseased bone; and the patients were able to go about the ward, and out, with the assistance of a crutch, without any pain. Case I. was discharged with the wound and all the sinuses healed; no dead or exposed bone could be found; and able to go about without a crutch. Cases III. and IV. died: one from secondary disease in the superior maxilla, and the other from phthisis. All the patients (except III. and IV.) are able to bear considerable weight on the diseased limb, and complain of no pain upon pressure. In Case V. the limb is stiff at the hip-joint, and since the bandage has been removed has increased in size, and is as large as the other.

The diagnostic value of an abscess or sinus above Poupart's ligament, indicating perforation of the acetabulum, as pointed out by Barwell in his work on "Disease of Joints," and by Bryant in the *Medical Times and Gazette*, 1869, is well illustrated in Cases I., IV., and V. In the first there was a sinus above the crest of the ileum and perforation, and in Cases IV. and V. there was a large abscess pointing above Poupart's ligament and perforation of the acetabulum; while in Case VII. there was a large abscess, no perforation, but disease of the rim of the pelvis. In Cases II., V., and VI., there is enlargement of the liver, and in Case VI. there was a trace of albumen before the operation, but there has been none since. In Case VII. there is reason for thinking that there is an hereditary syphilis. The advancing disease of the bones of the pelvis, as well as the shaft, precludes all hope of recovery.

The acetabulum was extensively diseased in Cases I., II., IV., V., and VII., while it was only roughened in Case VI. The shaft of the femur in Cases II., IV., V., and VI., was diseased at the time of the operation below the point of section; and in Case VII. the section had to be made below the trochanter minor on account of extensive caries above that point.

The appearance and condition of the bone in the four cases were alike; it was soft and discolored; the periosteum seemed simply to envelop the bone without being intimately attached to it, so that the shaft could be easily drawn out of it; the cut end of the bone in three of the cases resembled rather coarse cancellous tissue, having its meshes filled with a dark-red granular material. The external compact tissue was reduced to a mere shell; while in the fourth the centre of the bone had disappeared, leaving a cavity which readily admitted the finger for two inches or more. In the latter case a second section was made lower down, but only to find the shaft in the same diseased condition. In Cases II. and V. the end of the shaft became extensively eroded; after some time the original incision was reopened and an attempt made to find the limit of the disease, but after exposing two or more inches of the shaft, the bone presented the same external appearance, and on section the central portion exhibited the same diseased condition as at the point of first division. In Case IV. the whole femur was removed through the original incision made for exsection of the head. On examination, after removal, the whole bone was of a *dirty leaden color* and very *light;* it resembled a bone from which the periosteum had been removed by maceration; the foramina for the vessels, to the naked eye, did not seem increased in number or size. The periosteum was not intimately attached to the bone at any point, but seemed simply to envelop it. There was no bleeding either from the periosteum or bone, nor was there any pus between them.

There had been no attempt at bony formation either in the periosteum (involucrum) or bone (osteophytes). On longitudinal section, after being macerated and dried, the medullary cavity was found to be greatly enlarged at the expense of the compact tissue.. At the upper part the cavity is filled with cancellous tissue for the distance of one and a quarter inch, it then gradually becomes less, until it almost disappears at about the middle of the shaft, and is then only seen in tufts; the compact tissue is very much thinned, being reduced to a mere shell as it approaches either extremity of the bone, being slightly thicker in the middle, where its greatest thickness amounts to only one or two lines. The medullary cavity in many places is perfectly smooth, and has a glazed appearance; what remains of the compact tissue seems, to the naked eye, normal, with the exception that here and there it has a worm-eaten appearance, as though a number of Haversian canals had become enlarged, showing a tendency of the hard structure to assume the appearance of cancellous tissues. On microscopic examination of a longitudinal section, it presents the appearance of healthy bone. At the lower end the bone has a worm-eaten appearance, and a portion of it has disappeared. The weight of the shaft, after drying, is about two drachms and a half. The periosteum, which was removed after death together with the epiphysis at the knee-joint, is found to be greatly thickened, and in several places there is a deposit of bone, which I am certain was not there at the time of the operation. The epiphysis is perfectly healthy; there is a thin layer of roughened bone attached to it.

The portion of the shaft of the femur removed from Case III. at *post mortem* differs in some respects from the above: 1. It was *enlarged* at the point of section. 2. The periosteum was *attached* except where it had formed one of the walls of the abscess. 3. There was an attempt at plastic inflammation, as shown by the exostosis. 4. The bone on removal was of a perfectly normal color. On section, after maceration and drying, the compact tissue was found reduced in thickness, and it had a more worm-eaten appearance than the first specimen; the medullary cavity was enlarged and partly filled with cancellous tissue.

In Cases II., IV., V., and VI., there had evidently been an extension of disease from the head of the bone along the shaft, so as, in one case at least, to involve the whole diaphysis, and in two other cases it extended down at least to the middle of the shaft. It would furthermore seem probable that this affection of the shaft, when once it is well under way, does not become limited, but involves the whole diaphysis. There is a specimen in the pathological cabinet of the New York Hospital, taken from a child eight years of age, whose thigh had been amputated at the hip-joint, six months after an exsection of that joint for extensive disease, which illustrates this condition of bone. The bone is light, weighing only ten drachms. In external appearance it is perfectly normal. The epiphysis above the knee-joint is *diseased.* In the history of the examination of the limb no mention is made of the condition of the periosteum.

In the "Transactions of the London Pathological Society" for 1872, page 191, Mr. T. Carr Jackson reports the case of a patient nineteen years of age, whose hip-joint he had excised for disease of seven years' duration. The bone at the point of section was *soft*, and the *compact* bony tissue was *reduced* to a mere *shell.* He made a *second section* lower down, in hope of arriving at healthy bone, but in this he was *disappointed.* After the operation the general health of the patient improved for a time, but again became impaired on account of the discharge from numerous abscesses in the thigh. After amputation at the hip-joint he made a good recovery. Mr. Jackson states: "The femur after maceration weighed eight and a quarter ounces, against seventeen ounces, the weight of a healthy femur of the same size. The upper part had become enlarged and rounded, while stalactitic processes of somewhat porous but compact bone of irregular shape, and varying in size, project at various points. . . . The posterior part of the external condyle is softened."

On section, it is seen that the merest outside shell of bone remains. At the upper part a little cancellous tissue remains, and also for one and a quarter inch from the articular surface of the condyles upward. The rest of the shaft is an empty cavity, with a little fatty matter in it. The external compact tissue alone remains nowhere thicker than one or two lines. The whole bone may be said to have undergone an extensive atrophic process, and remains, while preserving its external form, but a skeleton of itself.

Mr. Holmes reports a case in "St. George's Hospital Reports" (vol. i., page 147), where amputation was performed for extensive disease about the hip-joint, and where the femur was broken near its head in attempting to throw the head of the bone out in exsection. The femur was found soft and diseased at both ends.

In the same paper Mr. Holmes says: "It must often have struck surgeons, when excising a joint, that the operation has been put off too long. The bone is soft, and its periosteum peels off so readily that much care is necessary on the part of the assistant to avoid exposing it below the surface of the section. The compact wall appears thinned, and the cancellous tissue confused, crumbling, and filled with a somewhat purulent-looking marrow." He advocates amputation in these cases.

Mr. Annandale, in his paper on the "Pathology and Treatment of 'Hip'-Disease," on page 13 makes the following remarks: "I have met with two cases of hip-disease in which the whole femur, ileum, and probably other of the bones, were diseased through their whole structure;" and on page 27 reports a case in which "the bone was so *soft* that it had to be removed in pieces. In this way the neck, head, and great trochanter, were removed. The wound did not completely heal, so it was again enlarged, and two inches of the shaft of the femur removed. The shaft of the bone where divided was, however, *diseased in the same way.*" The patient died six months later.

Dr. Sayre, in his work on "Orthopedic Surgery," reports having seen a case in which Dr. Spencer, of Watertown, N. Y., had removed "nearly the entire shaft of the femur, and perfect recovery took place." He does not state the condition of the bone removed, or what he considers a "perfect recovery."

In looking over the "table" of exsections in the above-mentioned work I find that in fifteen cases the section was made *below* the trochanter minor, on account of disease of the shaft; of these *seven* recovered and *eight* died. Of the seven who recovered the condition of the bone in two cases is reported as being *necrosed*, in two there remained a sinus, and in the remaining cases no mention is made of the condition of the limb at the point incised. The cause of death in one of these cases was tetanus.

Out of fifty-nine cases of exsection twenty are reported as having died; in two-fifths of these the shaft was diseased, and section had been made below the trochanter minor.

The treatment of fracture of the shaft, when occurring at the time of exsection, must depend on the condition of the bone. If the probabilities are that the shaft is simply atrophied, as must have been the condition in the two cases reported by Dr. Sayre, it should be treated as any other fracture. But if the shaft is diseased, as in Case IV., either exsection of the whole femur or amputation at the hip-joint seems to be the only alternative.

The question as to the nature of the changes in the bones mentioned above I am unable satisfactorily to solve. The condition of the periosteum, caries of the lower end of the shaft, and changes in the medullary cavity, as well as caries of the end of the shaft in two cases later, in my own cases, disease of the epiphyses in the specimen in the pathological cabinet of the New York Hospital, and the osteophytes and abscesses in Mr. Jackson's case, all seem to point to some chronic inflammatory process rather than to simple atrophy of the bone. I am satisfied that the disease of the shaft, in Cases II., V., and VI., is the cause of the persistence of the discharge, and I do not think that anything short of an amputation at the hip-joint would afford relief, but the presence of enlargement of the liver contraindicates a resort to the operation.

I know of no means of ascertaining the condition of the shaft before commencing to operate, except that cases of disorganization of the joint, of long standing, should be looked upon with suspicion.

In regard to the question when rest and mechanical treatment should give place to exsection, my own cases show only the result of too long delay. In hospital cases, at least, it seems to me, exsection should be performed as soon as it can be satisfactorily proved that there is dead bone in the joint, for, as a rule, recovery by natural means seldom takes place in these cases, and the danger of the occurrence of secondary disease of the liver and kidneys in these cases must not be lost sight of.

Since this paper went into the hands of the printer, the patient recorded as Case VII. has died from exhaustion. At *post-mortem* examination the end of the femur for about one-quarter of an inch was found necrosed and surrounded by an involucrum. The ischium was separated from the other bones and carious; the anterior portion of the ileum, including the anterior-inferior spine, was extensively diseased, as well as the whole acetabulum. On the inner surface of the ileum, about its middle, there was a spot of carious bone about three-quarters of an inch in diameter which had almost eaten through the bone, and there was some disease on the crest of the ileum. The femur, with the exception mentioned above, was perfectly healthy. There was no perforation of the acetabulum, nor thickening of the periosteum.

I have lately received a note from Dr. H. G. P. Spencer, of Watertown, N. Y., in reply to an inquiry in regard to the case mentioned by Dr. Sayre, in his recent work on "Orthopedic Surgery," and referred to in my paper, in which he removed the greater portion of the femur. The patient was a boy of about twelve years of age, who had had disease of the hip-joint since he was a child, and who, a few days before the operation, had fallen and fractured the femur at its lower third.

At the operation the head of the bone was found lying loose in the acetabulum. The periosteum was entirely separated from the shaft to some distance before the point of fracture, except a narrow strip on its outer aspect. The bone was dead, except at the attachment of the strip of periosteum. Section was made just below the point of fracture; but, as the bone seemed unhealthy at this point, a second section was nade lower down. No involucrum had formed. The limb vas kept extended until new bone had formed.

At the present time, a number of years since the operation, he patient has good motion at his hip-joint, and can walk niles with the aid of only a cane. The shortening is only *three* inches. Dr. Sayre, who has the specimen in his museum, has kindly allowed me to examine it, and to him, as well as to Dr. Spencer, I am under great obligations.

The head of the femur is separated from the shaft, and is carious. The upper portion of the shaft, for the distance of an inch or more, is surrounded by an irregular deposit of bone. The external compact tissue does not seem to be reduced in thickness, nor is the medullary cavity enlarged. There seems to have been a total *necrosis* of the upper two-thirds of the shaft.

ART. II.—*The Errors of Refraction demonstrated by a New and Original Model.* By F. A. MUNSON, M. D., Albany, N. Y.

THE errors of refraction in the human eye have, within the past few years, awakened a widely-increased interest as their great importance has been gradually developed, the recognition of which has necessitated, on the part of the general profession, the possession of at least an intelligent theoretical knowledge of these anomalies.

The peculiar and characteristic train of symptoms denominated asthenopic, so apparently independent of ocular trouble; other more complex and remote phenomena, such as pain in the back of the head and neck; the rapid increase of myopia in our schools and colleges; and the more recent but perhaps hypothetical inductions associating these errors with severer nervous lesions, have all contributed to render this subject one of general interest and importance.

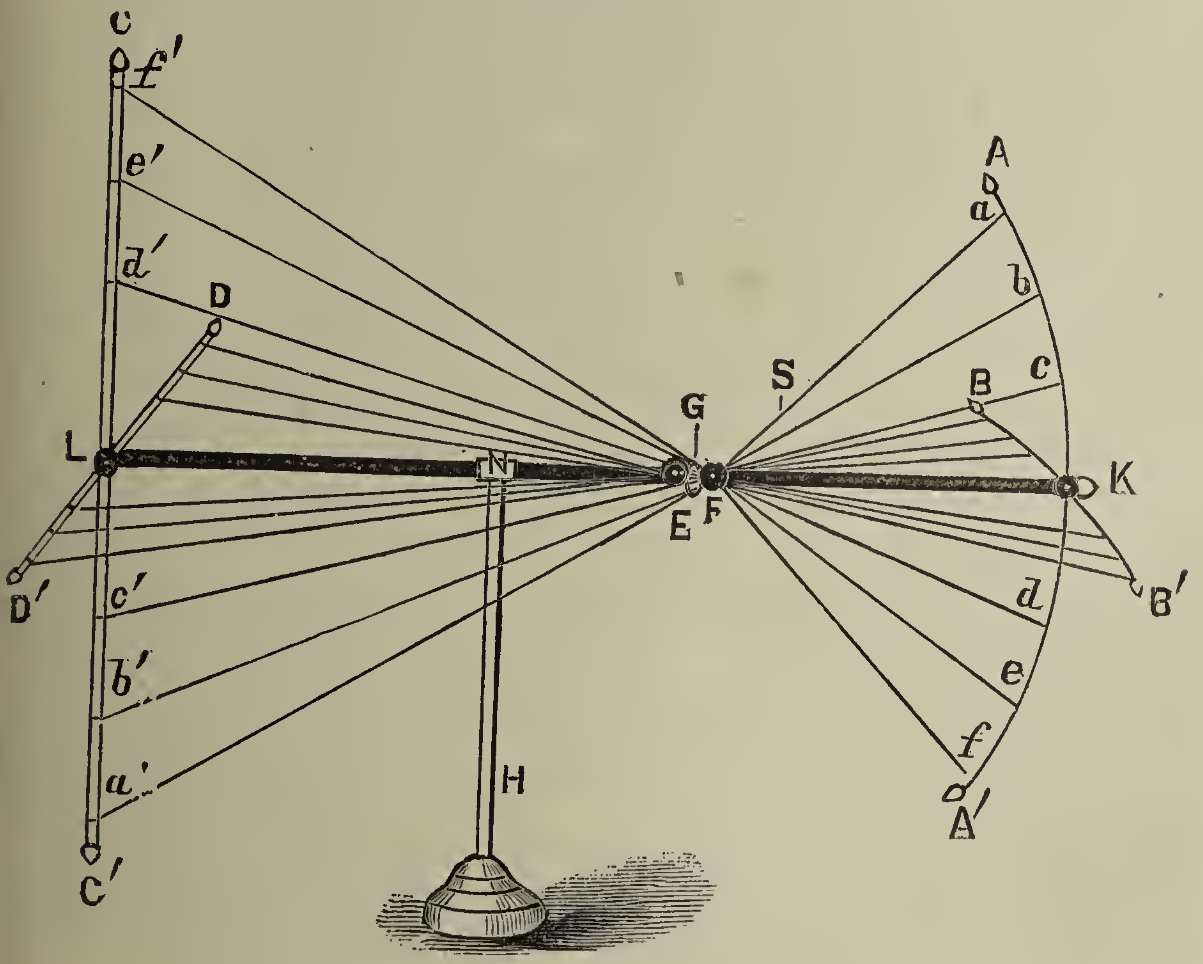
That this chapter of ophthalmology has, in the past, received so little attention in the college curriculum is neither because its importance has been unappreciated by the special teacher, nor because of its somewhat complex character, but rather, we believe, on account of the fact that a *demonstration* of the optical principles involved is not a little difficult and complicated, owing to the want of some more simple means of clearly and intelligently illustrating these conditions.

Blackboard drawings have always been of indispensable service in the class-room; but, for their full value to be realized, it is not only necessary to make repeated delineations of similar conditions, but also often to resort to perspective drawing, or to call upon the imagination to picture certain lines or planes, which are supposed to pass vertically through the surface of the diagram (this is particularly true of the representations of astigmatism); either process, unless, on the one hand, the teacher is an expert artist, or, on the other, the student is especially apt, demands both time and frequent repetition, and even then too often fails to make an enduring impression.

Stimulated by a sense of these facts—1. Of the growing importance of this subject to the general profession; 2. Of the difficulty attending its simple demonstration—the writer has recently devised a *model*, illustrating, in a clear and simple manner, *all of the errors of refraction.* This instrument is so constructed as to be readily adjusted to represent either the optical conditions of the normal eye (*emmetropia*), or those of *myopia*, *hypermetropia*, or *astigmatism*, including all of the various forms of the latter error.

The following is a brief description of the model, as represented in the accompanying drawings:

FIG. 1.



EMMETROPIA.

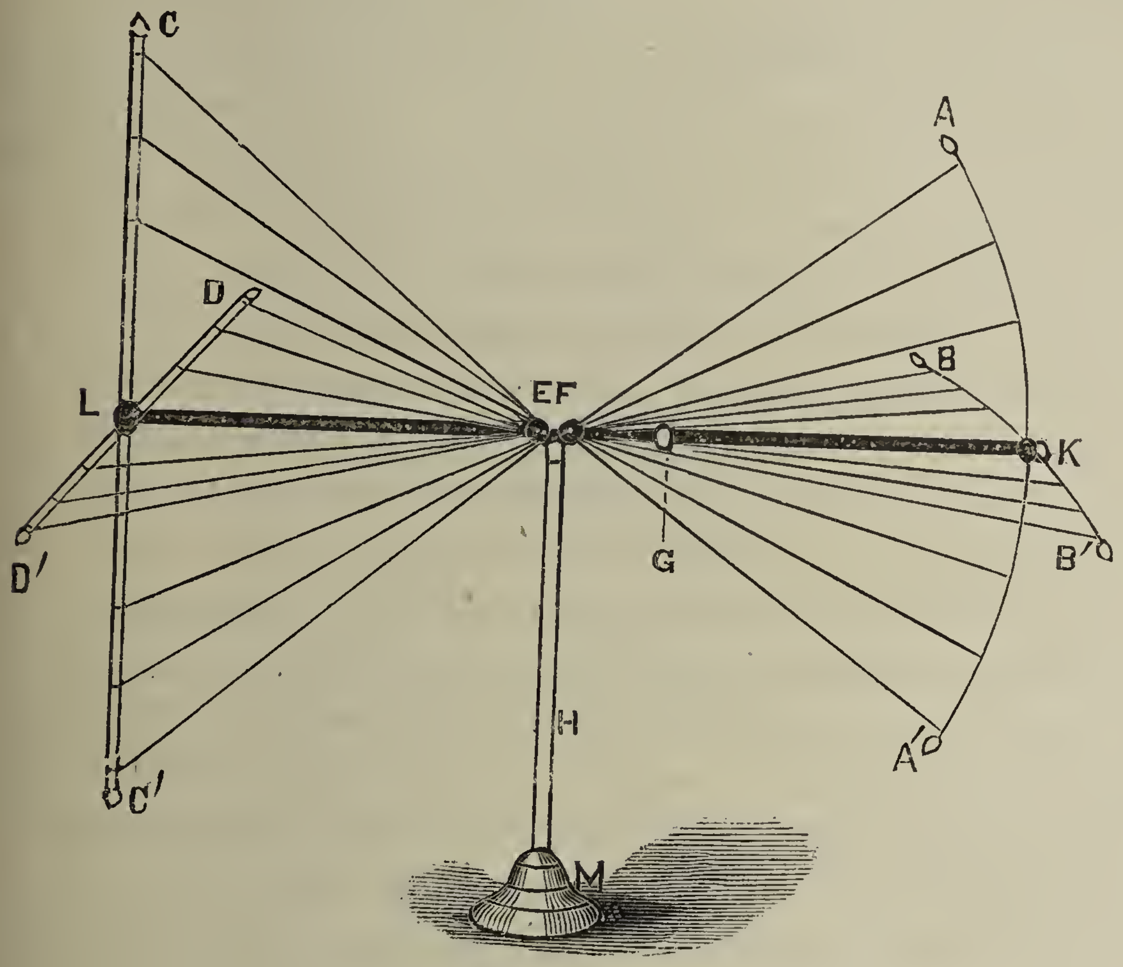
It consists of a brass rod (*L K*, Fig. 1), fifteen inches long, at one end of which (*K*) are two spring wires (*A A*,′ *B B*′), bent so as to indicate the anterior curvature of the eye and its refracting media; at the opposite end of the rod (*L*) are placed two straight heavy wires (*C C*,′ *D D*′), for the purpose of receiving the rays of light, represented by silk threads, after their divergence from a focal point. The long rod (*L K*) possesses a sliding movement backward and forward, and a rotary motion also in a small arm (*N*), which is in turn supported by an upright stand (*H*), in the top of which it also possesses an horizontal rotary motion. An ivory ring (*G*) slides, if desired, upon the brass rod, and is intended to indicate the position of the *plane of the retina.* Variously-colored silk threads (*a*, *b*, *c*, etc.) represent the course taken by rays of light after their refraction in the two principal meridians of the eye; all the rays in a given meridian *pass through a bead* (*E* and *F*), which represents the focal point for that meridian. The course followed by the threads after passing through a bead is practically the same as that taken by actually diverging rays.

Only two meridians of refraction are shown, the movements of which, however, are such as to admit of their being placed at any relative angle, although, for the sake of simplicity and convenience of explanation, it is much better that they should be placed at right angles to one another, as indicated in the drawings.

The beads are capable of a sliding motion upon the threads, which thus *permits the focal point of the rays in either meridian to be changed at will.* In Fig. 1 both beads (*E*, *F*), are placed upon the imaginary plane of the retina (*G*), at which point all the rays are united, producing a condition corresponding to the *normal* or *emmetropic* eye. The shape of the ring, and the necessary thickness of the beads, are such as to prevent the focusing of both meridians in an exact point —a state which, nevertheless, corresponds precisely with what is found in a normal eye, it being a well-known fact that a really perfect eye is rarely, if ever, seen. A slight degree of astigmatism, insufficient in itself to affect useful vision, forms a rule, the existence of which causes distant luminous objects to be seen as stars or rays, instead of points of light, as they would appear were the eyes optically perfect. Hence, what might seem a mechanical imperfection in the model, in reality illustrates a constant condition of the ordinary eye.

To render evident the optical features of *hypermetropia*, it is only necessary to slide both beads to some one point behind the ivory ring, or retina (Fig. 2), or the latter may be moved anterior to the focal point, thus showing, at the same time, that the rays are not only brought to a focus posterior to the retina, but that such an eye is actually a short one, and would demand a convex lens to collect the rays to a proper focus upon its retina—conditions peculiar to the hypermetropic or far-sighted eye.

FIG. 2.



HYPERMETROPIA.

Myopia may be represented by the opposite movements—both beads (*E*, *F*, Fig. 1 or 2) being changed to a point anterior to the plane of the retina (*G*), or the ivory ring being slid backward; the latter procedure also shows that the eye is a long one, while either manœuvre indicates equally well that the refractive condition is such that all the rays are united in front of the retina, and would require the use of a concave lens to disperse them sufficiently for union upon the retina—all of which is equally true of the myopic or near-sighted eye.

The many different forms of *astigmatism*, in which the rays of light are unequally refracted in the different meridians, are also clearly and simply demonstrable. Some years ago Dr. Knapp constructed an ingenious thread-model, intended to illustrate the conditions of this refractive error, in which he analyzed a *bundle* of rays, represented by the *circular* arrangement of threads upon a wooden frame, in which the lines formed by dispersion at the two principal foci were shown by bent wires through which the threads passed. This model exhibits truthfully the shape of a bundle of astigmatic rays, but does so at the expense of simplicity, and at the sacrifice of a clear illustration of the principles involved, without being adjustable so as to show the different varieties of astigmatism, so that for purposes of class demonstration its complicated construction renders it of little value.

In the instrument which the writer has devised, it will be seen that the analysis of meridional rays alone is made, so that *all* of the many forms of astigmatism, as well as the shape of the bundle of rays, are evidenced in the clearest and simplest manner.

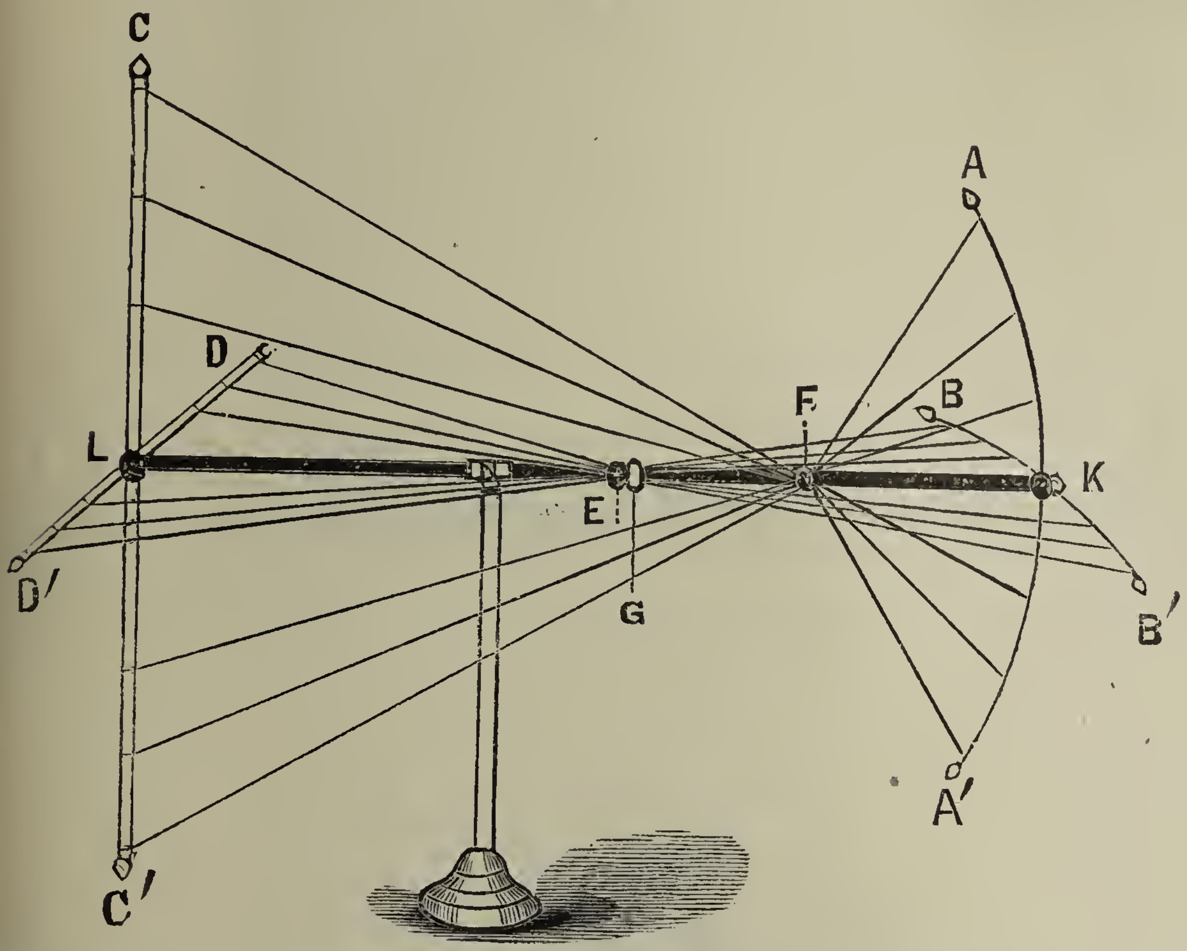
Even the rare conditions of an *irregular astigmatism* may be shown by adjusting the model as in Fig. 1, and then causing the rays *in the upper half* of the meridian $A\ A'$ to come to a focus somewhere anterior to F, which may be accomplished by pressing the threads a, b, c, down upon the rod $L\ K$, with the point of the finger upon them at S, so that the two halves of the meridian have different foci—the rays d, e, and f, in the lower half being brought to a point *upon* the retina, while those (a, b, c) in the upper half have their focus more *anterior*.

The three varieties of *regular astigmatism* are quite as easily demonstrated :

1. If we place both beads upon the imaginary retina, as in Fig. 1, and then move either one or the other anterior or posterior (according as we desire to indicate myopia or

hypermetropia in one of the meridians), it is evident the conditions will then respond to the definition of a *simple astigmatism*, for, while there is a simple error of refraction existing in one meridian, the opposite remains of normal focus. After sliding the bead *F* forward, as in Fig. 3, it will be seen that the rays in the horizontal meridian *B B′* are brought to a focus upon the retina (*G*), while the vertical rays are united in front of the retina at *F*, so that we have a *simple myopic astigmatism* in the vertical meridian. To show the same condition in the horizontal meridian, it is only necessary to rotate the rod *L K* in the arm *N*, by which means the meridians change their relative positions.

FIG. 3.



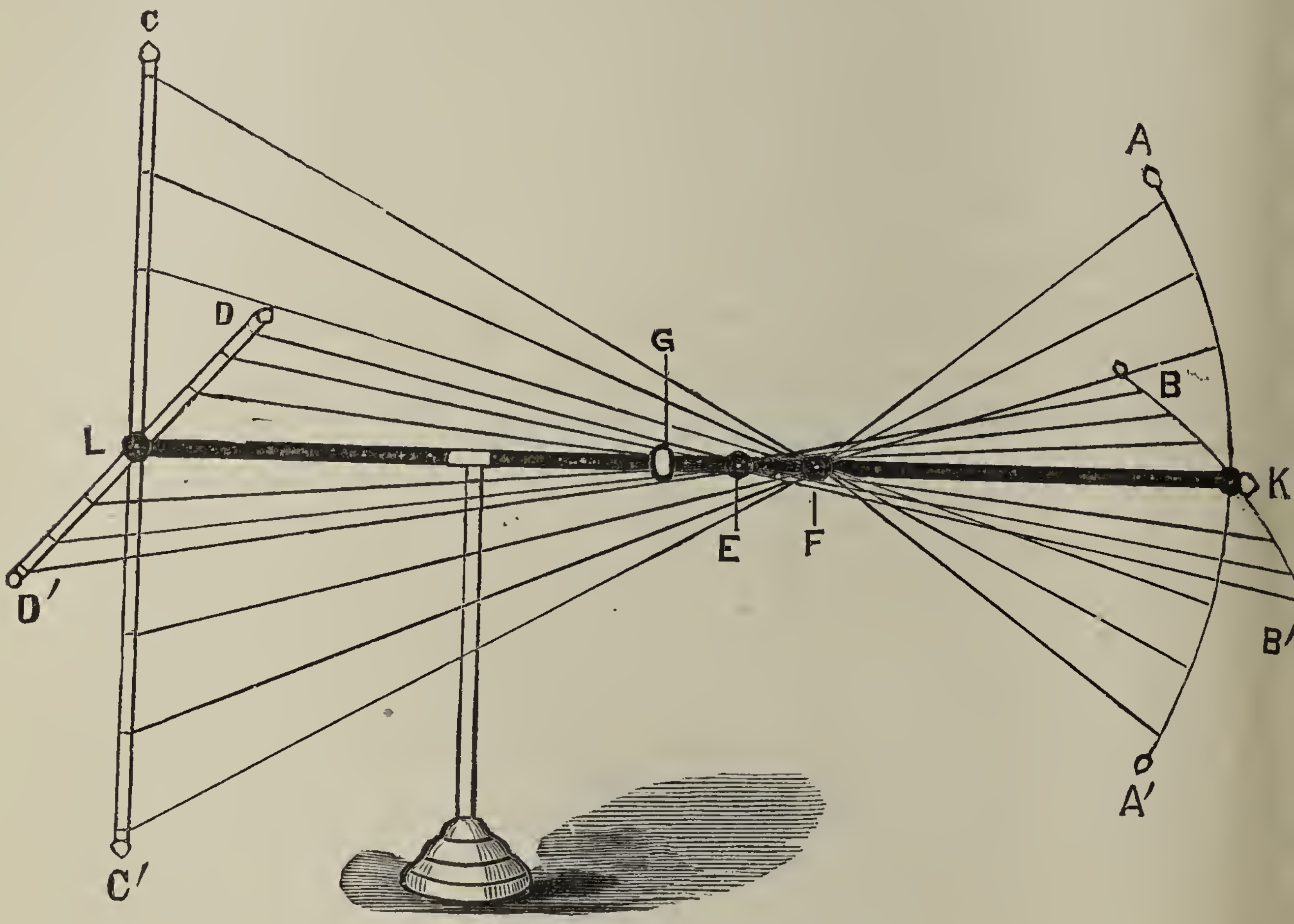
SIMPLE MYOPIC ASTIGMATISM.

A *simple hypermetropic astigmatism* would be shown if in Fig. 1 the bead *E* were moved to some point (toward *N*) farther away from the retina.

2. By changing both focal points (*E* and *F*) to *unequal* distances, either in front of or behind the retina, we comply with the essentials of a *compound astigmatism*. If they are

placed as in Fig. 4, the conditions manifest are those peculiar to a *compound myopic astigmatism*, for different degrees of myopia are shown in the different meridians. By moving the beads to unequal distances behind the retina (*G*), we should illustrate the optical features of a *compound hypermetropic astigmatism.*

Fig. 4.



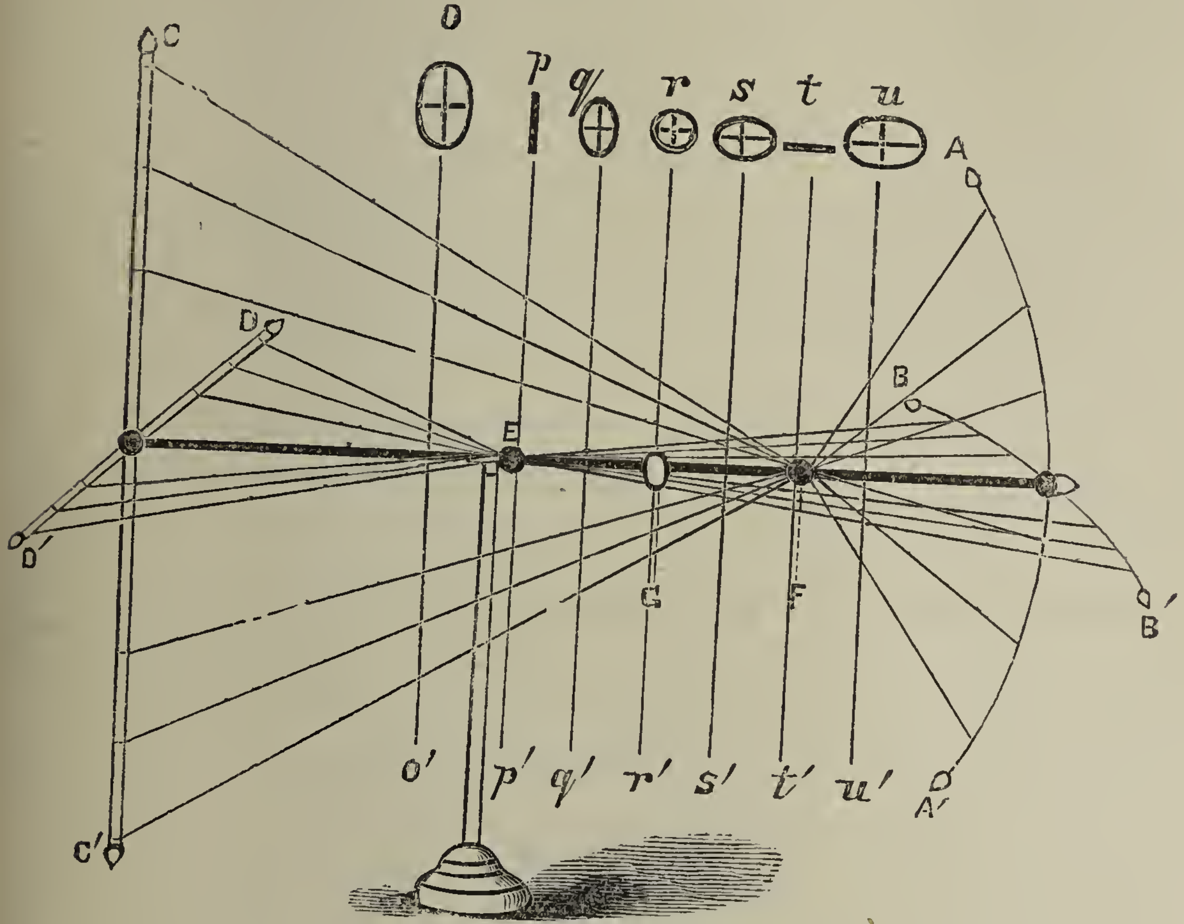
Compound Myopic Astigmatism.

Fig. 4 also indicates that the greater degree of myopia exists in the vertical meridian; but, to show a preponderance in the horizontal meridian, it is only necessary to change the relative position of the meridians, which is done (as above mentioned) by rotating the rod *L K.*

3. Finally, if we adjust the beads so that the rays in one direction are united in front of the retina, and those in the opposite direction are united behind the retina, we then produce conditions peculiar to a *mixed astigmatism*, for we exhibit the presence of myopia in one meridian, and of hypermetropia in the opposite. (*See* Fig. 5.)

It is known that, if cross-sections of a bundle of astigmatic rays are made at different points, the outlines thus obtained correspond to the shape of the dispersion images which would be formed upon the retina, were the latter placed at the point of section. If, for instance, the retina were moved to *F* (Fig. 5), a bright *horizontal line* of dispersion would exist upon it, formed by those rays which, not having their focus at *F*, cut the retina in the horizontal line *t t′*; an eye thus constructed, it is evident, would only obtain a clear image of objects (without the aid of a cylindrical lens) by looking through a narrow slit (stenopaic apparatus) held vertically so as to cut off the lateral rays. It will be further evident that a section made through *E* (the focal point of the horizontal rays) would have the form of a *vertical* line, while a section midway between *E* and *F* (the *focal interval*) would show the form of the bundle at that point to be circular (*r*); other sections carried anterior or posterior to those already named would have the shape of ellipses (*o*, *q*, *s*, *u*), varying in size, with their long axes either horizontal or vertical, all of which may be more easily demonstrated by the model than by the pen.

Fig. 5.



Mixed Astigmatism.

Several complicated instruments have been devised illustrating the errors of refraction by means of lenses and movable disks; but we believe that the use of adjustable threads, to represent the outlines of a bundle of rays in the manner we have described, furnishes an improved method of elucidating these important conditions, and as such we believe it will supply a deficiency long experienced.

ART. III.—*Physiology of the Brain: An Attempt to explain the Mode of Production of Movements following Electrical Irritation of the Cortex Cerebri.* An Address to the American Neurological Association, delivered in New York, June, 1876, by EUGÈNE DUPUY, M. D., Member of the American Neurological Association; Corresponding Member of the Société de Biologie of Paris, etc.

IT is nearly three years now since I first—after repeating and varying the interesting and startling experiments of Hitzig and Fritzsch, and those of Ferrier—concluded that the results which they had obtained on irritating certain definite spots of certain convolutions of the brains of mammals, and which results consisted, as is well known, in distinct, almost constant contraction of muscles, or groups of muscles, for each different point of the cortex cerebri excited, are not to be ascribed to the directly elicited action of the group of cortical cells immediately underneath the electrodes, but to a process of reflex phenomena. That, in a word, the old question of knowing whether or not nervous gray matter is excitable is still open; the new experiments of the above-named experimenters only go to prove that electricity, applied within certain areas of the convolutions situated around the fissure of Sylvius and the fissure of Rolando, is followed by movement in the limbs, but do not disclose the *modus faciendi* of the same. I need not state here at length the divers theories advanced by different physiologists to explain the facts discovered. Every one knows that those points which, on being irritated with electricity, bring on muscular contraction, are called *centres*. Ferrier, in his first memoirs, followed his predecessors, Hitzig and Fritzsch, and also called these points centres. Some authors, more prudent, call them now areas. But all are unanimous in believing that the irritation of the so-called centres, or areas, is followed by a discharge of nerve-force which directly sets the muscles in motion, thus substantiating the very ingenious theories of Hughlings Jackson, to whom we are indebted for the introduction of the captivating doctrine of evolution in neurological physiology and pathology.

But, as above stated, I was led from the very beginning of my researches, which were published in 1873, to reject the theory as propounded by my predecessors, on the ground that —1. Deep anæsthesia prevents the occurrence of muscular contraction in the experiment of Hitzig and Fritzsch and of Ferrier; 2. Drying the surface of the hemisphere with blotting-paper also prevents the occurrence of contraction; 3. That the contractions are not only produced by irritation of the anterior cortex cerebri, as claimed by the first observers, but also of the posterior lobes to some extent; 4. That irritation of the dura mater gives similar results, and of the same nature as irritation of the cortex; the movements are localized as well, the effects varying with different areas of the membrane; 5. That electricity could not be localized, as its effects are detected far and wide in the brain; 6. That under the influence of various vascular drugs, which increase or diminish reflex action, the phenomena are increased or diminished. Moreover, I showed in the beginning of February, 1874, to several physiologists of eminence, in London, at University College, that when the so-called centres are destroyed on both hemispheres, not only no paralysis of any kind ensues, but that, if a mild current of electricity is applied to the same disorganized so-called centres, muscular contraction results, just as if the so-called centres were normal. The same result obtains when the corpus striatum is in like manner irritated.

Ferrier objects to most of these conclusions reached by me. He states that, if, during deep anæsthesia, the irritation of the cortex cerebri does no more give rise to motion, it is because that part of the nervous centres is the first to be influenced by the anæsthetic, and loses its excitability; so that the experiment which I had made, and which consisted in irritating with the same current the exposed sciatic nerve of a dog, and getting contraction of the muscles animated by that nerve, while the cortex cerebri, similarly excited, responded by contraction when the anæsthesia was not deep, but gave no response when the anæsthesia was deep, did not show that the cortex was not motor as I supposed. Ferrier is manifestly in error here. It so happens that the hemispheres are the last to lose their excitability during the anæsthetic process. I know of very many experiments which teach that fact. Here is a very pretty one by Onimus, which I have made also. He took away the cerebral hemisphere on the right side in a frog, which had at once the movement deranged on the left side. The left side of the body had the position of a frog deprived of its brain. The left posterior leg is drawn up close to the body, it is doubled up; the anterior leg is equally approximated to the thorax and doubled up; it has the position which is constant in frogs deprived of their brain. The whole body at the same time inclines toward the left side. The attitude of that frog changes, and even becomes the reverse, if it is chloroformed; the left side, which was more doubled up, where the muscles were in a tonic state, predominating upon those of the right side, becomes weaker. That effect becomes more and more apparent as the anæsthesia becomes more manifest, until the time when both sides are under the influence of anæsthesia; the frog can then no more rest upon its anterior limbs; the posterior ones are inert. As the anæsthesia disappears, the legs on the sound side assume their normal position, and come nearer the body, while those of the opposite side still remain inert. Later on, those on the left side also resume their normal appearance; at this time all four limbs are in an identical position; but, when the normal state has returned altogether, the limbs belonging physiologically (the left limbs) to the part of the brain destroyed are again more doubled up and make the body lean on their side. That experiment, I believe, proves that the cerebral hemispheres are influenced *last* by anæsthetic agents, and that they are those parts which *first* resume their normal state.

Carville and Duret, lately, in their second memoir, published in the "Archives de Physiologie" for 1875, reject the idea that the phenomena observed are reflex. They say that these phenomena are not reflex: 1. Because they are localized. This enunciation must be ascribed to a *lapsus calami*, because it is impossible to believe that Carville and Duret do not know that reflex actions are very regular and localized, i. e., that always the irritation of one single point of the periphery of the body of a frog brings on reflex action in a part constantly corresponding. Who has not repeated a number of times the beautiful experiments of Légallois, of Dugès, and of Pflügger, by which these authors have established the existence of psychic, intelligent actions on the part of the spinal cord? 2. They do not believe Schiff's theory, that the phenomena are reflex, and which is based on Helmholtz's experiments, showing that a greater time elapses between irritation and motions following, when these are brought on by a reflex process than when by a voluntary irritation. This would lead one to believe that Carville and Duret are going to give experimental proofs of the fallacy of a fact which every experimenter has seen; but, as they have neglected to show on what ground their simple negation rests, I must discard their objection, as in experimental science a simple affirmation of a fact does not make it plain that the fact is as represented. We must have at least one proof that it is so, and not otherwise. Putnam, of Boston, said that if a sharp razor is passed so as to separate only the cortex from the cerebral tissue of one of the so-called centres, which before the operation responded by muscular contraction to the application of electricity, and the slice be left *in situ*, when the same mild current as before is applied on the slice *in situ*, no muscular contraction takes place. He thought, therefore, that the very mild current of electricity used by him did not go deeper than the cortex, and that the muscular contractions in the first experiment were the results of the discharge of the cells irritated by the current. He thought that he had in this way proved: 1. Localization of function; 2. That the cortex of the brain is excitable by artificial means; 3. That the muscular contractions in the experiments are the results of the discharge of the cortical cells. But this experiment, which I confess at first appears to have settled the question altogether, an be shown to have no such meaning as Putnam and others have surmised. For if to the experiment, done exactly as devised by Putnam, we add one single test, i. e., instead of leaving the slice *in situ* we remove it, and apply the very mild current used by him to the wet surface thus laid bare, the clot of blood being removed, *we do have* the same muscular contractions as before. It is plain, therefore, that the fallacy of Putnam's results must be ascribed to the fact that his experiment was incomplete, and that the physical circumstances (slice separated from fibres beneath by liquid and clot) marred the usual effects of electricity.

Ferrier has stated also that since electricity, applied to the same homologous parts of the brains of different animals, gives rise to the same homologous results, diffusion of electricity to deeper parts of the encephalon, or to its base, or to the apparent origin of nerves, plays no part in the production of the results, as I have concluded in my first paper. To this it may be answered that not only does electricity diffuse, as I have proved it, but that, as the arrangement of the convolutions is constant for the same species of mammals, it follows that electricity will be diffused in a similarly constant manner, so as to produce constantly the same effects in all the brains in which the sulci shall be in similar position; and the variety in the position of the so-called centres which he himself has seen to exist between the brains of cats, dogs, jackals, and monkeys—variety of position due to arrangement of gyri and convolutions, constant only in the same species—proves that fact. The physical circumstances (sulci full of liquid, etc.) being the same, we have the same results.

Having thus far satisfied myself that no serious objection has as yet been urged against the view which I held (for Hitzig, not having condescended to consider my objections, has since shown that he is unable to explain the *modus operandi* of electricity in his experiment; and I submit that, if he had taken the trouble to read my paper, he would have seen that my object was not to deny the truth of his results, but to explain them), and which Schiff has professed from experimental facts, and which also Brown-Séquard has been teaching for a great number of years, I set myself to find the process through which the reflex phenomena under consideration are produced. After carefully considering the results of my former experiments above noticed, I undertook a new series, of which the following are selections, showing through what course of circumstances I am impelled to draw the conclusion which it is my object in this address to submit to the consideration of those interested in that subject:

In a vigorous adult dog of medium size, I laid bare the cerebrum by removing the cranial bone exactly on a level with the region of the crucial sulcus on the left side, so as so expose the convolutions of that region which contain the so-called psycho-motor centres of the legs of the opposite side. I succeeded in the operation without loss of blood to speak of. I divided the dura mater thus laid bare, and the dog being almost completely under the influence of chloroform, I assured myself that the electro-faradic irritation of the part of convolution thus exposed gave rise to very apparent movements in the fore-limb of the opposite side—that is to say, of the right side. With a cauterizing-iron, olive-shaped and heated to whiteness, I very carefully touched the exposed so-called psycho-motor centres (still covered by the pia mater); the irritation of the part thus cauterized (by the current already employed to make sure of its locality in the beginning of the experiment) gave rise anew to the movements observed before the operation with the white-hot iron. I then sewed and dressed the wound. The animal a few hours later, when completely recovered from the effects of chloroform, exhibited no traces of paralysis perceptible to me.[1] The pupil on the corresponding side was, however, slightly contracted, and the eye a little moistened, the upper eyelid dropping. Twenty-seven days later the wound was completely healed. I found in the animal no perceptible alteration of motion or of sensation. I then reopened the wound, and found that the cranial bone, in the spot operated upon, was in process of regeneration. The dura mater, which had been divided by a crucial incision, was healed over and adhered to the mass of newly-formed tissue, and also, in a lesser degree, to a patch formed in the part cauterized. Irritation by an electro-faradic current, very tolerable on the tip of the tongue, of this escharotic spot, previously desiccated by blotting-paper and tinder (the dog being under the influence of anæsthesia), gave rise to no phenomena of motion in the limb, while the same current applied to the surrounding parts, and especially in front and below the escharotic patch, gave rise to movements of the limbs of the opposite side. After having successfully removed the escharotic spot (which was a little firm, and simply occupied the nervous tissue in the same manner as a sclerotic islet —the cavity which contained it appearing to be neither the seat of inflammation nor of a softening—and in appearance like a cystic sac, about once and a half as deep as a half-franc piece), I applied the current to this cavity, desiccated with some difficulty, without obtaining movements in any part, though the same current, directed a little behind this point, gave rise to motion in the muscles of the neck and abdomen. In a great number of experiments made upon dogs, cats, Guinea-pigs, and rabbits, I always found in the majority of cases, after even a protracted length of time, the brain to be the seat of inflammation more or less limited or acute, in the parts cauterized. The exceptions are not very numerous, but comprise two dogs, a few Guinea-pigs, and one cat, from which I obtained results identical with those above mentioned.

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[1] It has appeared to me that the paretic state which supervenes in such destruction of the cortex follows only when inflammation sets in.

It is to be presumed that, in this and similar experiments, the iron heated to a white-heat has not caused deterioration, save, perhaps, of the pia mater and of the underlying cortical layers. It is to be remarked that, as I had observed in my earliest experiments (1873 and since), and as a great number of experimenters have since recognized, if the so-called psycho-motor or ideo-motor points are cauterized or destroyed, the animals, after a space of more or less duration, exhibit no sign of paresis; and, if, after having destroyed the said points, the affected parts are then and there irritated with faradic electricity, the same movements are obtained as before. The experiment which I mention shows, I think, that, if it is attempted, many days after the operation of cauterization, to reproduce movements by electrical irritation, nothing is obtained, even though the part irritated be the seat of neither inflammation nor of softening. The pia mater and the cortical layer alone have been destroyed; and preceding observations, I repeat, have shown that this destruction does not prevent the movements from taking place, when they are called forth immediately after the so-called motor centres have been destroyed. I ask myself whether the movements usually observed in experiments of that nature are not due to the irritation, not of the cortical layer, but of the vascular nerves of the pia mater and vessels numerous in the parts habitually irritated—an irritation producing contraction of the blood-vessels. In the experiments reported above, I believe no other parts were destroyed after the twenty-seven days' lapse of time between the two operations, beyond the pia mater, the cortical layer, and certainly the nerves entering the cerebrum, either alone or along blood-vessels.

I showed to the Société de Biologie, in Paris, in 1875, the brain of a dog, which I had injected with carmine, and which showed very plainly that the parts, i. e., points on both sides of the extremity of the crucial sulcus, are those where the blood-vessels and vascular nerves assume a peculiar distribution. They there penetrate into the cerebrum, some vessels only ramifying into the cortex, and the larger artery going deeper, together with nerve-fibres from the pia. Now, recent anatomical researches have shown that the strands of fibres which ramify into the crown of Reil, and the internal capsule, and those which form the fibres of the frontal convolution, which are not excitable even by electricity, are virtually the continuations of the spinal cord. The connection between those pia-fibres and blood-vessels, and those strands, are the factors to be considered. Another experiment also tends to show that the view above expressed may be defended; for, if, in rabbits, the so-called centres or areas for the anterior limbs be destroyed by the actual cautery, and the four blood-vessels of the brain, two vertebral and two common carotids, be simultaneously tied, after the manner of Bichat, Kusmaul and Tenner, an epileptiform convulsion ensues, in which all four limbs take part at the same time; nd, if the same operation is done upon rabbits several weeks fter the burning of the areas, the limbs which are not paralyzed in any degree and in any sense partake again in the general convulsions.[1]

Carville and Duret do not think that the pia mater has anything to do with the phenomena observed after electrical irritation of the convolutions; because, when they had torn that membrane away, they still had the same results with electrical irritation. This objection is not unanswerable: supposing it granted that the fibres going from that membrane into the cerebrum are the agents concerned, it is well known that fibres *do not* lose their physiological properties immediately after being separated from their centres; but, even were it not so, and if the facts stood as they believe, after Hitzig and his followers, how do they account for the production of the contractions occurring after irritation of the cortex, physiologically disorganized by the tearing off of the pia mater?

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[1] I have, at different times, endeavored to establish the fact that vasomotor centres are not localized within the cerebro-spinal system, but only send in fibres from the ganglia and the cerebral pia mater, which contains numerous small ganglia; in a word, that those centres are totally independent of the cerebro-spinal system. I hold that, for the hemispheres, the vasomotor fibres take their origin in the tissue of the pia mater; also, to some extent, this is the case for the spinal marrow, which receives its nerves besides from ganglia. This theory is based on analyses of disease in man, and experiments on animals, which I shall soon publish. Rainey, in 1845, stated that the arachnoid is a nervous membrane—sympathetic nerve. Henle criticised this view, which, however, can derive support from Meckel's writings, and perhaps from some later researches of Henle. Hannover, in 1844, figured ganglia and fibres on the Gasserian ganglion: this fact, which has not attracted much attention, goes far toward explaining the different trophic phenomena which follow the section of the trigeminus according as it is made after or before the Gasserian ganglion. Claude Bernard, and lately François Frank, have shown also that vascular nerves of the cerebral, as well as of the spinal roots of nerves, become connected with these latter only at the point of emergence from their apparent origin. Meynert has said that he has found cells and fibres beneath the cortical layer of the cerebrum, which appear to be in connection with similar elements in the pia. Miezerjewski states the same thing. In the dog, not only is such an arrangement easily seen, but I have been able to prepare a portion of the anterior convexity of the brain in such a manner as to show that connection. Those cells and fibres of the sympathetic are more numerous around the medulla oblongata, and chiefly the basal portion of the pons.

Brown-Séquard, who has recorded very interesting vaso-motor phenomena, in the eyes and elsewhere, following deep burning of the cortex cerebri, has stated that certainly those effects are not due to vascular nerves contained in the pia mater, because burning after the peeling of the pia mater still produces the same effects. Besides the answer I give above to Carville and Duret, I beg leave to state that the *mere* peeling of the pia mater produces those interesting vaso-motor effects on the eyes and elsewhere, so that the burning adds nothing to the degree, nature, or intensity, of the phenomena observed.

That nerve-cells discharge nerve-force seems rational enough, but it is actually not a fact in the sense generally understood. Nerve-cells are conductors as well as centres of reflexion; i. e., are the organs whose function it is to transform irritation, or incitation, sensation, etc., into motion, for secretion is a product of a mode of motion, just in the same way as is central sensation: the fibres and gray matter either conduct toward the sensorium commune, wherever that centre may be, the sensation already elaborated, or convey an influence which elaborates it there; but we have no proof that any group of nerve-cells ever did discharge nerve-force in the sense generally entertained. If there is a discharge of nerve-force, it must be a continuous one (just as a constant current from a good battery), always kept up by the process of nutrition.

When sudden anæmia of the brain is followed by epileptic convulsions, it appears more rational to believe that, instead of a discharge from the brain taking place, a suppression of the cerebrum has occurred, and thus the dynamic or galvanic state of that part of the nervous system which has not suffered suppression of blood is altered. The fact that the spinal cord is then in a state of exalted excitability, and causes convulsions, can be explained by the phenomena which then supervene, viz.: more blood loaded with carbonic-acid gas, suppression of the moderating, or, rather, inhibitory influence of the brain upon the spinal cord, or of parts of that organ upon itself. In convulsions arising from profuse hæmorrhage, it can be said that, the influence of the brain being taken away, the spinal cord becomes the seat of troubles, which exteriorly are seen to be convulsions, but this does not imply that the spinal marrow has lost first its excitability, for it is well known that the reflex faculty is rather exaggerated in the spinal cord of a frog deprived of blood.

If it is asked what is the function of nerve-cells, I will answer that, besides their power of receiving, transforming, and conveying impressions, it is not unphilosophical to imagine that, having been impressed by a certain irritation, in a certain way, for producing a certain effect, their dynamic state, through nutrition, is shaped into a definite channel for the circumstance; hence the ability of a certain group of cells to produce a definite effect, always constant under definite stimulation of whatever nature. In a word, this theory is the one known by the name of "organization of past experience." But, I fully accept Meynert's theory, revived from older writers, that nerve-cells have no power to spontaneously enter into functional activity. Moreover, perhaps, I may be allowed to submit that nerve-cells, like other tissues, are not permanent structures, but only are permanent dynamically. The beautiful experiments of Brown-Séquard, which I have repeated, and of which I have followed the results through four generations of Guinea-pigs, give no little support, derived from a pathological source, to the doctrine that it is the power to develop a functional activity, normal or exalted, which the nerve-elements are endowed with through acquired habit, or accident, or heredity. I refer to the transmission of artificially-induced epilepsy in Guinea-pigs, and other disorders of the nervous systems, in the same animals. The experiments have shown that, in epilepsy, for instance, the young ones are born without the disease, but go through all the stages of the disease at a certain age, exactly as their parents did.

Now, on studying any organ, the first rule is to discover the property of the tissue under consideration, and then the functional endowment of the same: as far as nerve-cells are concerned, we can safely state that their property is what I have recorded above in a condensed form; and their functional endowment can be discovered by deduction and observation, made according to what is just said above. It appears also plain to me that, if there is any "vraisemblance" in the theory given above, all idea of localization in the strict or physiological meaning of the word must be abandoned.[1]

I think, therefore, that the whole of the foregoing facts constitute a safe ground to establish this theory, that the phenomena of contraction of a definite group of muscles which follow the irritation of a certain area of cortical matter, always the same for the same phenomenon observed, are due to a reflex process, in which the vascular nerves play the first part; and are identical in *kind*, if not always in degree, with those which are obtained by irritating different portions of the dura mater: 1. The kind of contraction which is identical with the one occurring in the celebrated experiments of Kusmaul and Tenner. 2. The lapse of time, which is greater than when the contraction takes place through voluntary action. 3. The vaso-motor phenomena, which follow irritation and destruction of the pia mater. 4. The complementary experiments so very suggestive of Rochefontaine, of Lepine, of Eulenberg and Landois, and those of Brown-Séquard, which, together with those of Landois, go *altogether* to show vaso-motor paralysis in the limbs, sometimes on the same side, sometimes on the opposite, and the remarkable influence of the burning of the cortex cerebri in Brown-Séquard's experiments, in producing the well-known effects of the destruction of the sympathetic upon the eyes.

I need not state that the experimenters above named do not offer the same explanation as I have endeavored to give; they differ from me, and differ among themselves. I believe that the results of their experiments furnish good arguments with which to support the theory which I have stated earlier, and which I think accounts satisfactorily for the *modus faciendi* of the phenomena which follow irritation of the cortex cerebri by electricity.

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[1] I wish to state that those who, unacquainted with the methods of experimentation, have deduced, after Hughings Jackson, Broca, and Charcot, a theory of localization based upon clinical observations, have put themselves in an issue with logic. They contend that all the cases brought forward by Brown-Séquard and by myself, in which destruction of a large part of the cerebrum, say on the right side—irrespective of locality—has aused paralysis on the right side, and none on the left, that there were in hose cases unseen lesions in the left hemisphere, which would account for he paralysis; but here comes logic: if the facts are so, then it must be dmitted that the lesion on the right has caused no symptoms; and, if a ross lesion detected in the right hemisphere has caused no symptom, how an it be supposed that an unseen one in the opposite hemisphere is the ause of the phenomena?

Clinical Records from Private and Hospital Practice.

I.—*Six Cases of Aneurism of the Thoracic Aorta.* By John A. Octerlony, A. M., M. D., Visiting Physician to the Louisville City Hospital, Louisville, Ky.[1]

Case I.—*Aneurism of the Descending Aorta and Organic Disease of the Heart.*—M. W. H., aged forty-seven, married, and the mother of several children, applied to me for treatment in the spring of 1868.

Previous History.—She was born in Prussia, and when quite young came to this country with her parents. The father died of homesickness; the mother died of old age. The patient was quite strong and healthy until 1855, when she received a severe shock from fright during the Know-Nothing riot which took place in Louisville during August of that year. Her health first became seriously impaired in 1864. The menopause took place in 1866. She had been subject to occasional attacks of malarial disease. There was no evidence that the patient ever had syphilis.

Present Condition.—Her complexion is somewhat cyanotic; the lips are livid; she has frequent attacks of hard, dry cough, especially on exertion, and occasionally expectorates large quantities of phlegm. She has palpitation of the heart, which is increased by a full meal, and any exercise or emotion. She cannot lie with her head low nor on the left side; the former induces a sense of choking, and the latter becomes intolerable on account of the labored action of the heart and the transmission of cardiac sounds to the ear. She complains of frequent pain in the præcordia, and pains running down the arms; a steady, gnawing pain is also felt between the shoulder-blades. She suffers from severe headaches, and rushes of blood to the head, accompanied by noises in the ears, and muscæ volitantes. Her appetite and digestion are impaired; there is a stoppage in the upper or middle third of the œsophagus. The bowels are torpid; the extremities are cold and mottled, but there is no œdema. She often starts suddenly when going to sleep, with the sensation of falling a great distance.

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[1] Read before the Medico-Chirurgical Society of Louisville, January 26th, and published by request of the Society.

Physical Examination.—The pulse is 100 per minute, of good strength and volume; it gives a distinct back-stroke; is alike in both radials. Respirations 28 per minute.

Inspection.—There is a very distinct impulse at two points in the chest, as though there were two hearts, one beating below on the left side of the sternum, the other above at the right sternal edge between the second and fourth ribs. Both carotids are seen to pulsate strongly; the right subclavian is also the seat of strong visible pulsation; in the left it cannot be seen, but is easily felt on applying the finger.

The apex of the heart is deflected and beats almost at the anterior border of the left axilla, and in the sixth intercostal space. The impulse is diffuse and undulating.

Percussion.—Deep cardiac dullness reaches vertically from the seventh to the fourth rib, horizontally from the anterior border of the left axilla to one inch beyond the right sternal edge. On the right side of the sternum, between the second and fourth ribs, and corresponding to the seat of bulging and pulsation, there is also dullness, beginning fully two inches to the right of, and extending nearly across, the sternum. At the point of bulging there is a distinct tactile thrill. Pulmonary percussion normal in front, but posteriorly on the right side resonance is very much diminished, and in the interscapular space there is dullness.

Auscultation reveals a loud, double bellows-murmur over the apex—the systolic murmur being heard of greatest intensity at this point, and transmitted upward and outward toward the left acromion. The diastolic murmur lessens in this direction, but becomes more intense as the ear is carried upward toward the base.

A double bellows-murmur is also heard at the base of the heart, and transmitted over the right side of the chest. Over the area of bulging and dullness, on the right side of the sternum, is heard an intense rasping, double murmur, somewhat lower in pitch than the valvular murmur; it is transmitted into the great vessels to a considerable distance, and posteriorly is heard with great distinctness below the spine of the right scapula.

A musical ringing sound is also heard over the whole heart.

Respiration is normal on the left side, both anteriorly and posteriorly; on the right side it is very feeble in front, and is almost entirely extinct behind.

The *diagnosis*, made at the time, was aneurism of thoracic aorta, hypertrophy and dilatation of the heart, mitral regurgitation, aortic regurgitation, and roughening or some obstruction at or near the aortic orifice. I thought that the aneurism was given off from the right side of the descending aorta, although this is of very rare occurrence. The following points, however, appear to justify my opinion: Circumscribed bulging, pulsation, thrill and dullness under percussion on the right side, aneurismal murmurs at the same point, which could be differentiated from the valvular bellows-murmurs, and finally the pulmonary signs indicating compression of the right lung.

That the aneurism was given off from the descending part of the aorta was deemed likely because the local signs (dullness, bulging, thrill, and pulsation) were found lower down (second to the fourth rib) than is usual when it is given off from the ascending part or from the arch. There was no hoarseness or aphonia, and no irregularity of the pupils, and the equality of the radial pulse on both sides, the absence of œdema in the upper extremities, the severity of the pain, and the dullness of the interscapular region, all tended to strongly confirm this view.

The case progressed gradually to its unfavorable termination, which took place in 1870. During the intervening two years she suffered from severe attacks of bronchitis, and the general symptoms of advanced cardiac disease. The aneurism slowly increased in size, and finally produced hoarseness and severe dyspnœa. I was not in attendance at the time of her death. No autopsy was held.

Case II.—*Fusiform Aneurism of Ascending and Transverse Aorta; Valvular Disease of the Heart, with Hypertrophy and Dilatation.*—James Fitzgerald, white, single, aged twenty-eight years, native of Georgia, a farmer, admitted to the Louisville City Hospital in September, 1873.

Previous History.—He never had either syphilis or rheumatism, and his health was always good until 1861, when he had a severe attack of "typhoid pneumonia." On recovering from this illness he enlisted as a soldier in the Confederate army, and served in the field. In the spring of 1863 he received a slight flesh-wound, which quickly healed, and shortly after he received another wound in the chest; the ball entered the second intercostal space, nearly two inches from the right edge of the sternum, passed through the body, and lodged under the skin over the scapula, from which locality it was removed by the surgeon. According to his own account, this severe injury was attended with no serious or protracted symptoms. He spit up blood at the time, but two days after the wound was received he was out of bed, and marched all day. In the evening he noticed some œdema of the ankles. No mention is made in the record of his further history until he was admitted to the Louisville City Hospital.

On October 20th he began to have violent pains shooting across the sternum. He had already had œdema of the lower extremities for some time; this now greatly increased, and his face became œdematous.

On December 1, 1873, I saw him for the first time, and was told by the resident physician that another practitioner had quite recently examined the patient, and had made the diagnosis of effusion in the pericardium, and that he had, at the same time, urged the immediate use of the aspirator.

The following was his condition when first examined by me: He was quite pale, his countenance had an expression of distress, the breathing was somewhat rapid and labored, and he suffered from dyspnœa. The pulse was jerking, and not accelerated. The feet and ankles were œdematous. He had cough, and expectorated white, frothy fluid. The urine was scanty and richly albuminous.

Physical Examination; Inspection.—There was strong, visible pulsation in both carotids; the supra-sternal notch was almost obliterated, and forcible pulsation was seen at this point. Pulsation was also visible at the right sternal edge above the second rib. The heart's impulse was diffuse and very strong. The apex beat about two and a half inches outside of the left nipple, in the seventh intercostal space.

Percussion.—The area of precordial dullness was greatly increased; there was dullness over both lungs posteriorly, reaching above their lower thirds.

Auscultation.—A loud, double bellows-murmur was heard over the apex of the heart; a double bellows-murmur was also heard at the base of the heart, and was transmitted up into the carotids. On the right side of the sternum, at the base of the heart, was heard a purring, systolic murmur, and over this region was also felt a marked thrill on palpation.

Diagnosis.—Fusiform aneurism of the ascending and transverse portion of the aorta; aortic obstruction and regurgitation; mitral regurgitation, with hypertrophy and dilatation of the heart.

Progress of the Case.—The patient was put on digitalis, with diuretics and general tonics, but with only slight and transient alleviation of his symptoms. Dropsy increased, and he had orthopnœa. Death occurred suddenly on December 11, 1873.

Autopsy.—Both lungs were œdematous; the right was adherent posteriorly; its upper lobe was adherent in front and also to the aorta; immediately to the right of this vessel was a cicatricial line, which marked the course of the bullet-wound received in 1863.

The portion of the lung overlying the ascending aorta was somewhat emphysematous. The heart was enormously enlarged; when emptied of blood it measured seven inches in length, and seven inches in breadth, at the base; all the cavities were enlarged, especially the left ventricle, which was excessively dilated, its walls thickened, and measuring, at the thinnest point, one and an eighth inch. The right ventricular wall measured three-eighths of an inch in thickness. The left auriculo-ventricular opening was enlarged, and measured four and a quarter inches in circumference; the right auriculo-ventricular opening measured the same. The curtains of the mitral valve appeared thinner than usual, its chordæ tendineæ unusually long and slender, and appeared stretched.

On that portion of the surface of the cavity immediately below the aortic valve was a small atheromatous deposit. The valvular curtains were thickened and flattened, and two of them, instead of rising vertically, stood out horizontally like shelves, and flapped up and down with the current of fluid poured in or flowing out. The ascending and transverse aorta was greatly dilated, measuring four and one-fifth inches; about half an inch beyond the origin of the left subclavian the aorta almost at once resumed its normal calibre. The arteria anonyma was also so much dilated that the first phalanx of my little finger could easily be passed into it. The intima of the aorta, throughout its dilated portion, was studded with numerous rough, atheromatous patches; the walls were thickened. Heart-muscle was very pale, and showed fatty degeneration. No signs of pericarditis, present or past. The brain and membranes were congested. Stomach thickened, and mucous membrane in a condition of catarrh. Liver large and hardened; Glisson's capsule thickened. Kidneys highly congested.

Remarks.—One of the most interesting points in this case is the rapid recovery of the patient after a gunshot-wound of the right lung, which was shown to have gone through the body. I believe that the adhesion of the pleura posteriorly, as a result of a previous pneumonia, must have greatly favored the cure by mechanically preventing effusion of blood into the pleural cavity.

The absence of dullness over the aneurismal dilatation was explained by the adhesion of the overlying lung to both aorta and sternum, and by its emphysematous condition. The disease of the aortic valve, and atheroma of the aorta resulting in aneurismal dilatation, were the result of a former inflammation of the intima in these situations, which probably began in connection with the pneumonia from which the patient suffered in 1863. The mitral insufficiency must have been secondary to the aortic lesion, and was due to excessive dilatation of the ventricular cavity, and to stretching of the auriculo-ventricular opening.

CASE III.—*Aneurism of Ascending and Transverse Aorta.*—H. M., aged forty-nine, born in Germany, painter, married, first consulted me on January 22, 1876.

Previous History.—Twenty years ago, when he was a sailor, he had an attack of acute articular rheumatism, which merged into the subacute form, but finally left him. He has never had another attack. He has never had syphilis. His health, with the above exception, was remarkably good, until shortly before Christmas, 1874, when he fell, while painting, from a trestle, a distance of about four feet, and, reaching the floor, struck his chest with considerable force against the trestle. He suffered immediately from a sharp, shooting pain, in the lower part of the chest, extending upward. This pain finally became fixed in the upper part of the chest, near the right sternal edge, and, after a while, assumed a burning, gnawing, or boring character. Owing to this accident he was laid up for six weeks. After recovering sufficiently, he worked for two weeks, but was then obliged to stop, and laid up for nine weeks. After this he resumed work, and continued at his trade until a few days before Christmas, 1875. He has been able to do no work since then. During the year he had suffered from the following symptoms: Constant pain in the right side of the chest, but subject to remissions and exacerbations; shortness of breath on exercise; during the nine weeks of confinement he had orthopnœa for about two weeks; palpitation of the heart, which at times became excessive; inability to lie on his left side on account of the "thumping" of his heart against the pillow; vertigo and fullness of the head, especially when excited by emotion of any kind; cough and expectoration of white frothy mucus; great restlessness at night, with the sense of falling while going to sleep; frequent startings during sleep, and he would often be wakened from his slumbers by the violent beating of his heart; appetite and digestion continued good, and the bowels were open and regular.

Present Condition.—He is strongly built; has fine muscular development, and appears well nourished. His color is a little cyanotic, especially about the lips. The pupils are symmetrical and normal; no arcus senilis; breathing is good, eighteen to the minute. There is visible pulsation in the right brachial artery. The external jugular veins very prominent; the superficial veins of the upper extremities are greatly distended, so are also those of the lower extremities, especially below the knees. The heart's impulse is diffuse, and somewhat but not excessively increased in power, and visible in the sixth intercostal space, two inches outside the left nipple. The line of vertical dullness measures five inches, horizontal dullness at apex four inches.

There is a prominence by the right edge of the sternum, commencing at the upper border of the second costal cartilage, measuring two inches; over this area there is visible pulsation. The depression in the supra-sternal notch is much more shallow than usual, and has slight visible pulsation; even light pressure in this locality causes a sense of suffocation.

At the apex of the heart there is a systolic bellows-murmur; the pulmonary second sound is very strongly accentuated.

At the base is heard a double bellows-murmur, the systolic being transmitted upward into the aorta.

The pulse is regular and not much accelerated; but there is a marked difference between the radial pulse of the right and that of the left side. The former is much fuller and stronger than the latter. His hands and feet are cold, the hands are mottled. The urine is normal. He still suffers from the symptoms above related, and is almost entirely unable to work at his trade.

For several weeks he visited me regularly, and derived some benefit from the medicines prescribed, viz., a belladonna-plaster over the aneurismal prominence, ergot and digitalis nternally, etc.

After a while his visits ceased, and I lost sight of him until October, 1876, when I was summoned to his house. On my arrival I found the poor man in a most pitiable condition. The countenance was quite livid, and expressive of distress;

there was great œdema of the feet and legs. He suffered from constant dyspnœa, which was increased by the slightest exertion, and occasional paroxysms of intense and alarming dyspnœa would suddenly come on without any apparent provocation. Orthopnœa was so unremitting that for weeks he had not been able to lie down. His voice was very changeable, and sometimes he became quite hoarse. The aneurism now caused considerable bulging to the right of the upper third of the sternum, and had greatly increased in size. The heart had still more dilated, and was much weaker. The murmurs had become so feeble as to be almost inaudible. On percussion there was dullness over the whole right lung, both in front and behind; vocal fremitus absent, and auscultation showed entire absence of respiratory sounds. His appetite had entirely failed, digestion was much impaired, and he complained of frequent nausea, and some difficulty in swallowing even small morsels of solid food; the bowels were constipated, which caused him much discomfort.

While in this condition the patient was seen by my friend Dr. Gunterman, who confirmed the diagnosis of aneurism.

Having gradually become very feeble, the patient suddenly died on the 18th of November, 1876. I did not hear of his death until after the funeral; it was therefore impossible to obtain an autopsy.

Remarks.—It is at least probable that the valvular lesion originated in an endocarditis at the time of his rheumatic attack twenty years ago; cardiac hypertrophy and dilatation were probably developed secondarily from the valvular disease.

The active growth of the aneurism must have dated from the time of his fall from the trestle-work, but it is likely that the arterial walls were at that time in a state of dilatation, probably from an endarteritis, whose origin may have been coeval with the rheumatic endocarditis.

The character of the aneurism cannot, for want of a *post-mortem* examination, be established with absolute certainty. I do not believe the descending aorta was its seat; most likely it was of the ascending and transverse aorta. Whether it was simply a fusiform dilatation, or a compound of this and the sacculated form, I cannot tell. The diminished pulse in the left upper extremity must have been due to constriction, at the origin of the subclavian of that side, caused by "endarteritis deformans." In the absence of other marked symptoms, referable to the sympathetic, I cannot believe it depended upon vascular contraction from irritation of that nerve by pressure.

Case IV.—*Aneurism of Descending Aorta.*[1]—The patient began in 1869 to suffer from hoarseness. He was then thirty-nine years of age. Six months later, while in England, the diagnosis of aortic aneurism was made by means of the laryngoscope, which revealed paralysis of the recurrent laryngeal nerve of the left side.

During the fall of 1872 he suffered constantly from pains in the left shoulder and arm, and a pulsating swelling developed under the left clavicle; it grew rapidly, and soon measured three inches from the left sternal edge outward, and two and a half inches from the clavicle downward. The swelling continued to increase slowly. In October, 1873, the pains returned, and a secondary swelling formed immediately at the sterno-clavicular articulation; it measured about one and a quarter inch in diameter, and was soft and strongly pulsating; the integument over it had a dark-blue, almost black, color. After two weeks, pulsation in this secondary aneurism diminished, and it became harder, and decreased in size until, after a while, no trace of it could be discovered.

Toward the close of September, 1874, a secondary aneurismal swelling again appeared with the same features and in the same place as the former, and quite soon a gangrenous spot was seen at its most prominent point.

Seven injections of tincture of the chloride of iron, each five to six drops, were thrown into this secondary aneurism during four consecutive days, with the result that pulsation entirely ceased. A week later hæmorrhage set in, and returned in increasing amount, and the patient soon succumbed. During the last days of his life a pleuritis arose on the left side. A few minutes before he died his voice became again quite clear.

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[1] The following three cases are translations from *Nordiskt Medicinskt Arkiv*, for 1876.

Autopsy.—The heart was flabby; it measured eight centimetres transversely, and ten centimetres longitudinally; on its anterior was a thick deposit of fat. The musculi papillares were flattened; the valves were normal. The aorta was smooth at its origin, the external coat was thickened. Three centimetres above its semilunar valves, and rather in the posterior segment, began a dilatation of the vessel, from which projected the aneurismal sac; its opening into the aorta measured 4.5 centimetres in diameter; it extended upward under the left clavicle, pushed between the layers of the pleura, and occupied the whole upper third of the left thoracic cavity.

Immediately at the left sterno-clavicular articulation, the aneurism had penetrated the pectoral muscles, and approached to the very integument: at this point was an oblong opening, surrounded by livid undermined edges, and measuring 2.5 centimetres in length. Below this point the intercostal muscles were perforated in the first and second interspaces. Here the first rib was uneven and rough, and the second rib was corroded and fractured. There was still another perforation of the skin and subjacent muscles; it was larger and irregular in form; in it lay exposed the third rib, which was also corroded and fractured.

This large aneurismal sac was fully the size of a new-born child's head, and was filled with layers of hard, reddish-brown, coagulated fibrin; toward the centre the coagula were of softer consistence. Close by the opening into the aorta of this large aneurism, which has been described, but separated from it by a rounded margin, was the opening of a smaller aneurism the size of an apple; it was also filled with a fibrinous clot; its opening into the aorta measured 2.5 centimetres.

From this opening downward to the heart the intima of the aorta was covered with hard cartilaginous plates, but it was normal at the origin of arteria innominata, and in descending thoracic aorta.

This aneurism was closely adherent to the trachea, which was compressed by it immediately above the point of bifurcation.

Case V.—*Aneurism of Ascending, Transverse, and Descending Aorta.*—This patient was a powerfully-built man, who had been quite healthy until the present illness. He applied for medical advice on account of shortness of breath, especially on exercise. He also complained of hoarseness, wheezing during expiration, and cough, with scanty mucous expectoration.

Objective examination developed nothing abnormal. After a temporary improvement the symptoms named became worse; the attacks of dyspnœa were much more severe, and during one paroxysm, which lasted two hours, the difficulty of breathing was extreme, and the patient became so intensely cyanotic that he was almost black in the face.

About this time was noted dullness upon percussion over the inner third of the left clavicle, and in the same region was heard a slight murmur with the first sound of the heart.

Dyspnœa, though somewhat lessened, still remained, and percussion-dullness became gradually more marked, and extended over the sternum, measuring about two square inches. Posteriorly, the percussion-sound became less clear in the supra-spinous and in the scapular regions of the left side. The systolic murmur, already mentioned, became more constant and distinct. The respiratory sounds in the upper lobe of the left lung became very feeble, while those over the right lung grew rather more intense than normal.

The diagnosis of aortic aneurism was now made, and the patient was treated with ice-bags and injections of morphia and ergotin. Under these remedies he improved for a while, and was able to go about. Difficulty in deglutition next set in, and he was able to swallow only very small morsels. The œsophageal obstruction was felt sometimes on a line with the manubrium sterni, at other times in the cardia. His condition improved for about a month, and then again changed for the worse. The paroxysms of dyspnœa occurred, on an average, two or three times in the twenty-four hours; and on these occasions there were *contraction* of the pupil and prominence of the eyeball, which continued as steady symptoms in this case. After six months' illness the patient died. The objective symptoms most notable during the latter period of his life were dullness under the left clavicle and quite strong pulsation. The systolic murmur formerly heard had passed away, and respiration was about the same in both lungs.

Autopsy.—The heart and lungs were normal. The aorta was dilated to three or four times the normal calibre from its origin to about the middle of the descending thoracic aorta; the dilatation was cylindrical and even; the artery was empty. On the lower wall, where the transverse becomes the descending aorta, was a decolorized clot, which divided the canal of the vessel into two channels. The internal surface of the aneurism was everywhere in a state of atheromatous degeneration and ulcerated. The œsophagus and vertebræ were healthy.

Case VI.—*Aneurism of Descending Aorta.*—The patient was thirty-eight years of age. He had led a roving and adventurous life in various parts of the world. His had been a checkered career, and he had been quite dissipated. In 1863 he contracted syphilis, for which he was treated with iodide of potassium, mercury, and hydrotherapeutics. In 1865 he began to suffer from pains and stitches in the left side of the chest, and occasionally from vertigo.

Gastric disorders came on after a while, but yielded after repeated courses of treatment at some mineral springs. The pains in his left side, however, continued, and during 1875 all his symptoms considerably increased. He had tenderness and cutting pains in the left side of the abdomen and chest, sometimes so violent as to make him cry out loudly.

On December 14, 1875, he was admitted to the hospital. The expression of his countenance indicated disease. The left pupil was larger than the right, and was irregularly elongated in the vertical diameter; it responded to light. There was tenderness under pressure, over the spinous processes, of the five lowest dorsal vertebræ.

The left side of the chest measured more than the right. The heart's impulse was most plainly seen in the fourth, fifth, and sixth intercostal spaces of the right side. Cardiac dullness on the *right side* began at the fourth costal cartilage, and became continuous below with the hepatic dullness. Beginning from the right sternal edge, and extending outward, the area of dullness measured from seven to eight centimetres. The heart-sounds were distinct, but with some loss of clearness. There were no murmurs. The pulse was irregular. Percussion yielded perfect resonance over the whole anterior surface of the left lung; but there was dullness on its posterior surface from the angle of the scapula downward, with absence of vocal fremitus and vesicular breathing. The pulse was synchronous in the radial and crural arteries, but more feeble on the left side than on the right. On February 6, 1876, the patient suddenly died.

Autopsy.—The heart lay entirely in the *right* pleural cavity. In the *left* pleural cavity there was a large quantity of thin, light-red fluid, and in the posterior part were large masses of blood-clots. Projecting from the descending part of the thoracic aorta was an aneurism fifteen centimetres long and five centimetres deep. It began at the seventh dorsal vertebra, and extended downward to the point of attachment of the diaphragm to the spinal column. At one point was a rupture in the aneurism four millimetres in size. The heart was of ordinary dimensions; the valves and orifices were normal. The intima of the aorta, beginning at the valves, was covered with a multitude of larger and smaller, somewhat elevated, yellow patches. The seventh and lower dorsal vertebræ, including the twelfth, were more or less destroyed from pressure of the aneurism; the bodies were eroded, but the intervertebral cartilages remained intact. The left aspect of the vertebræ was much more eroded than the right, and on the left side the destructive process had penetrated so far backward that the heads of the lower ribs were exposed, and one of them, in consequence of the articulation being opened, had become dislocated from the spine.

Remarks.—This case presents several points of interest. It tends to corroborate the recent view, entirely opposed to the old theory, that aneurism does not induce hypertrophy and dilatation of the heart.

The conditions present render it very clear that the left trunk of the sympathetic must have been considerably displaced; that it thus became liable to inflammatory or other changes is easily perceived. Various clinical phenomena speak strongly in favor of this view; the heart was exceedingly irritable, and that without any pathological change in its structure that could account for such irritability. Peristaltic action of the intestine was decidedly increased, without any catarrhal symptoms to explain it; both these conditions indicate great irritation of the sympathetic. In addition, there was contraction of the arteries of the left side of the body, with resulting diminished pulse-wave, which could scarcely be otherwise interpreted than as an extensive irritation of the main trunk of the sympathetic, and this irritation being produced by the pressure of the aneurism upon the nerve. Almost certain proof of such implication of the sympathetic is found in the dilated condition of the left pupil, for which there appeared to be no other explanation. It is inferred that atheroma of the aorta was the starting-point of the aneurism, and probably depended, in this patient, upon syphilis, which experience has shown to be a not unfrequent cause of this process.

II.—*A Case of Cancer of the Vertebræ, with Infiltration of Various Other Organs.* Reported by L. Putzel, M. D.

Mrs. A. B., aged fifty-four, married, mother of three healthy children; the patient is below the medium size, and has a very spare figure; she was always remarkably healthy until two years ago; there is no hereditary taint of any kind either on her father's or mother's side. During the last five years the patient has undergone a great deal of mental anxiety and distress. Two years ago Mrs. B. injured her left breast as she was leaving a street-car, the breast coming in contact with the platform of the car with considerable violence. Soon afterward a small, hard, painless lump appeared in the breast at the site of the injury and gradually increased in size, retraction of the nipple soon taking place, and the axillary glands of the left side becoming enlarged. At the end of three months from the first appearance of the tumor, ulceration took place in its substance about an inch above the nipple; the discharge from the ulcer, which was not particularly offensive, ceased after a couple of weeks, and a thick scab formed over the site of the ulcer, the scab persisting from this time until the death of the patient. The tumor kept on increasing in size for a period of six months after ulceration occurred, until it had attained the size of a small orange.

I was first called to see the patient toward the end of April, 1875, and found her suffering from a violent attack of neuralgia, the pain migrating into various parts of the trunk and upper extremities; the attack had developed quite suddenly. After a few days the neuralgic affection became strictly malarial in form, being attended with severe chills and regularly intermittent variations in temperature, of the quotidian type. At the end of a week the attack succumbed to forty-five-grain doses of quinine *per diem.* The patient remained well for only three weeks, when the neuralgia recurred, the pains becoming gradually more and more atrocious in character. The chest and abdomen were carefully examined from time to time without the slightest deviation from the normal condition being detected in any of the viscera.

This attack lasted until the middle of August, the patient being confined to her bed during this whole period from weakness consequent on the violent character of the pains. The treatment consisted in the administration of various tonics and the successive employment of almost all the nervine remedies mentioned in the materia medica. None of the drugs employed produced the slightest beneficial effect, with the exception of atropine, which, when given to the extent of producing marked dilatation of the pupils, dryness of the pharynx, rapid pulse, and slight tendency to delirium, produced considerable relief. After the use of the drug for a few weeks, however, it became entirely inefficient. A peculiar fact noticeable in the employment of the atropine was that, when administered by subcutaneous injection it produced less effect than when the same amount was given by the mouth.

The only relief that could eventually be obtained was from the hypodermic administration of Magendie's solution of morphine, the dose of which was finally pushed to two hundred and fifty drops *per diem* in order to render the patient tolerably comfortable. In conjunction with morphine, I employed subcutaneous injections of hot water, which exerted considerable anodyne influence. After a while I was led to observe that injections of cold water produced the same amount of anodyne effect. And here it may be well to note a very curious fact with regard to the comparative effect on this patient of hypodermic injections of morphine and of water. The former always produced a more profound and permanent effect in relieving pain than the latter; but while, in the beginning of the malady, the relief experienced from the morphine was almost instantaneous, and that produced by the water only became palpable after the lapse of four or five minutes, toward the latter stages of the disease this relation was reversed, the relief experienced from the administration of the water being instantaneous, while that from the morphine was felt only after the lapse of several minutes.

The symptoms of the disease were of the most diverse character. For a few days the pain was chiefly confined to the right hypochondriac region, the skin over a circumscribed spot being very sensitive to slight pressure, deep pressure being productive of much less pain.

Again, the pains would radiate along the course of the nerve-trunks of the upper or lower extremities. At such times I often produced considerable relief by firm pressure with the hand over the trunks of such nerves as were implicated. Often attacks of vertigo would supervene, during which the patient would shriek for fear that the ceiling was falling on her, or that the bed was turning upside down.

The patient frequently had attacks of congestion of the brain, characterized by dizziness, tensive pain in the head, tinnitus aurium, at times hallucinations of audition—as ringing of bells or singing—rapid pulse, violent throbbing of carotids, size of pupils varying but never deviating much from the normal. When these congestive attacks did not assume their most violent character, they could readily be subdued by applying ligatures sufficiently snug around both upper and lower extremities to prevent the return of the venous blood to the heart, but not tightly enough to obstruct the arterial circulation.

At other times there appeared to be an implication of the pneumogastric nerves, the symptoms consisting of a terrible sense of oppression in the præcordia, with usually slowed (sometimes quickened) respirations, and the pulse so rapid and thin that it was sometimes almost impossible to count it.

The neuralgic pains were very rarely localized in the spinal column, and at no period during the entire course of the disease did any tenderness on pressure exist over any part of the spinal column ; the spinal curves were normal, and no tumor could be felt in connection with any of the vertebræ.

The disease varied in the manner above described, the paroxysms occurring with great frequency (often as many as four in a day), and the patient never being entirely free from pain for more than a few hours, until the beginning of August, when the paroxysms slowly became milder and gradually disappeared, so that the patient was free from pain, and able to walk around by the middle of August. At this time the mammary tumor was beginning to diminish in size spontaneously, and had almost disappeared by the beginning of December, 1875. The axillary glands were also growing smaller, so that they were scarcely preceptibly larger than those of the right axilla or than the inguinal glands, all of them being about the size of a large pea. About January 1, 1876, the tumor again began to increase very slowly in size, the skin first becoming affected peripherally, and the process then extending more deeply into the tissue of the pectoralis-major muscle.

So slowly did the process extend that at the death of the patient (January 31, 1877) the tumor was not larger than a hen's-egg. At no time were there any indications of the existence of a visceral tumor ; the chest and abdomen were carefully examined from time to time, and, although the abdominal walls were so thin and relaxed that the bodies of the vertebræ could be distinctly palpated, no tumor was discovered.

From the middle of August, 1875, the patient remained in tolerably fair health and quite free from pain, until the beginning of October, when the neuralgia again recurred with the same violence as in the previous attack, and presenting the same general characteristics. This attack lasted until the beginning of June, 1876.

Several times during the course of the disease the patient suffered from an intermittent fever with chills, similar to that which existed in the very inception of the disease. During these attacks the spleen remained of normal size, and no lesion could be discovered anywhere which could give rise to the symptoms.

During all these attacks the mind of the patient was usually very clear, but at long intervals she had various hallucinations of sight and hearing, the unreality of which she always immediately recognized until within the last three weeks of life, when it became difficult for me to persuade her that the hallucinations had no material basis.

From June, 1876, the patient remained well only for one month, when the neuralgia again returned, with continually-increasing severity, and was only terminated by death (January 31, 1877). The immediate cause of death was acute pleurisy of the left side, complicated with œdema of the lungs.

Autopsy.—The results of the autopsy, which want of time prevented me from making as carefully as was desirable, were substantially as follows:

Brain.—Convolutions extremely well developed; brain-structure perfectly normal; dura mater, slight pachymeningitis over the convexity of both cerebral hemispheres, the new-formed membrane being so thin as to be scarcely visible; a few small cancerous nodules were scattered over inner surface of dura mater; calvarium normal.

Spinal Cord.—Only the dorsal portion of the cord could be examined; the cord itself was entirely free from disease; dura mater, slight pachymeningitis apparently of about the same date as the cerebral; the dura mater was very firmly adherent to the vertebræ, and minute carcinomatous deposits projected from its inner surface.

Vertebræ.—The bodies of the dorsal vertebræ (which were the only ones examined) were infiltrated with the cancerous neoplasm to such an extent that they could be cut with the knife; the laminæ of the vertebræ were also affected in a similar degree; there was no malformation of the vertebræ. The long bones of the body could not be examined.

Mamma.—The tumor of the left breast was nearly as large as a hen's-egg, and presented the ordinary appearance of scirrhous cancer; it did not extend beneath the deep fascia of the pectoralis-major muscle.

Lungs.—Right lung slightly œdematous; pleura normal; under the right pleura, and growing from the ribs, were a few small cancerous nodules. Left lung slightly œdematous; left pleura coated with fibrinous exudation; small amount of fluid in pleural cavity; no cancerous deposits to be found on this side.

Heart.—Slight degree of brown atrophy; muscular tissue rather friable; valves normal.

Stomach and Intestines normal.

Liver.—Surface smooth; size of the organ perhaps a trifle greater than normal; liver-tissue largely infiltrated with carcinoma, the deposits varying in size from that of a pea to that of a walnut; from the cut section of the new growth a moderate amount of juice could be scraped with the knife; its consistence was a little firmer than that of the normal liver-tissue; the carcinomatous portions occupied at least one-half of the entire bulk of the liver.

Spleen and Kidneys and Retroperitoneal Glands normal.

Uterus and Left Ovary normal. Right ovary was transformed into a scirrhous mass of apparently homogeneous structure, which had attained almost the size of a goose's-egg.

Histological Appearances.—The new growths in all the organs presented the appearances of carcinoma simplex of a rather small-celled variety; in some places the amount of stroma present became very much diminished, constituting the softer variety of cancer; in other places the relative proportion of stroma to cells became reversed, and the growth presented the appearances of scirrhus.

An interesting question connected with the pathology of the case, and one which I do not think admits of an entirely satisfactory answer, is: What was the manner of propagation? Did the disease originate in the breast, and were the other organs infected from this as a starting-point, or was each organ affected independently of the others? There are several strong points to be adduced against the first view, but I shall only refer to the following:

In the first place, cancerous nodules were found under the right pleura, but there were none under the left pleura, although the left breast was involved in the carcinomatous process.

Again, the extraordinary amount of cancerous infiltration of the vertebræ, together with the fact of the neuralgic pains existing in all parts of the body from the beginning of the complaint, would tend to show that the vertebræ (and consequently the nerves as they passed through the intervertebral foramina) were affected from the very commencement of the disease. At any rate, if the breast were the starting-point of the process, the other organs must have become involved independently of the lymphatics, and cancerous germs must have been distributed throughout the body through the medium of the blood-vessels alone.

III.—*Median Lithotomy; Recovery.* By Chauncey Mitchell Field, A. M., M. D., Bound Brook, N. J.

Patient, Mr. Samuel Richardson, of Martinville, N. J.; Scotch descent; twenty-eight years old; married; mason and bridge-builder; living in mountainous region—chiefly of trap formation; water mostly "soft." This region is somewhat prolific of calculi; the cause I am unable to suggest. Height, five feet ten inches; weight, one hundred and thirty-eight pounds. General nutrition moderate. Has been accustomed to good, substantial food; not in the habit of taking stimulants, and careful of protecting health; has never had any previous illness. First saw patient January 26, 1876. Three years ago he first felt the trouble, being seized with violent pain in the renal region, recurring at intervals. During this period he was attended by Dr. C. H. Horton, to whom he presented some half-dozen calculi of small size.

At the end of December, 1875, being seized with sudden retention of urine, he consulted Dr. C. H. Stillman, of Plainfield, N. J., who, on introducing the catheter, hit with an audible click a hard, foreign body, and from history of case diagnosed vesical calculus, the stone having become impacted in the urethra, and so causing retention. On his advice he consulted surgical aid in New York, and at a clinic was examined by eminent authority, and no stone detected. The patient then came into my hands. His face bore a pained, anxious expression of suffering; complexion of a dull lack-lustre color, somewhat resembling the type called bilious; manner intelligent; had a peculiar, shuffling gait, produced by pain on locomotion; complained of pain in region of bladder and perinæum, increased by riding or walking; extreme pain, sharp and cutting, at tip of penis, especially at end of micturition.

The nervous system had suffered, and was irritable; the appetite poor; tongue coated; breath of disagreeable odor; respiratory and circulatory organs normal; bowels irregular, with tendency to constipation; hæmorrhoids; increased frequency of micturition of small amounts of faintly acid urine, containing an abundance of mucus; occasional sudden stoppage of the stream.

On passing the sound gently along the urethra, as it reached the region of the prostate, the perineal muscles were violently contracted, and the sound held firmly in their grasp, the patient being seized with chill and complaining of intense agony. Allowing the instrument to rest for a short time, and then using it as "the pen and not the sword," it finally passed into the bladder. Yet, on the slightest touch or movement of instrument, it would be so firmly grasped as almost to preclude its diagnostic use, and I was unable to sound the bladder with any degree of thoroughness. I withdrew instrument and gave hypodermic injection of morphia, and, as there was a considerable amount of urine in the bladder, I determined to use an ordinary male silver catheter, corking it until well into the bladder, but experienced the same grasping of instrument. Withdrew the cork, hoping, as the urine passed, the stone would be washed against the instrument, but was disappointed. As I withdrew the catheter, I distinctly felt it grate, giving impression of hard substance in region of prostate, but was unable to increase the sensation by finger in rectum.

Believing the calculus to be of small size, I ordered potassæ iod. et bromid. āā ℈j in a half-glass of water, to be repeated in four hours, the patient to retain urine as long as possible, hoping to increase amount of urine, and, by means of the bromide, lessen the extreme irritability of sphincter, and so possibly enable the patient to rid himself of his torment. About six hours after the first dose, on attempting to urinate, the patient felt something slip into the urethra and immediately stop the stream. Suffering great pain, he sent for me, but, being out of town, he called to his rescue Dr. B. B. Matthews, who, to the patient's great joy and comfort, delivered him of a calculus weighing nineteen grains, two inches in circumference of long axis, by one and one-eighth inch in short, of gray, ashy color, triangular and elongated. There was no necessity for the use of instruments in removal of stone from urethra, simple pressure on the penis being sufficient. On my return I congratulated the patient, and supposed this the end of his trouble.

But March 15, 1876, I saw him with Dr. Stillman. He then had the usual symptoms of stone. Pain in bladder increased on motion ; frequent desire to micturate, passing small quantities of urine containing ropy mucus, pus, and, at times, blood, accompanied with frequent spasms of perinæum and stoppage of stream, and has experienced no relief from passage of the calculus.

Being unwilling to be sounded, we ordered rest and morphia suppositories.

I next saw patient April 22, 1876, in consultation with Dr. H. C. Horton. When fully etherized I detected, by means of the sound, a largish calculus lying in a depression behind the prostate : decided to operate as soon as we could get patient in a suitable condition. He was confined to bed and given plenty of barley-water and light diet for a few days. He had become weak and debilitated. Pulse 105, temperature 100°. The day preceding the operation the bowels were evacuated by means of castor-oil, and the patient kept mildly under the influence of morphia.

May 2, 1876, I proceeded to operate—Drs. Stillman, Sr and Jr., of Plainfield, Drs. Baldwin and Rice, of New Brunswick, and Dr. Horton, of Martinville, being present.

I chose lithotomy, as the patient had become weak through frequent attacks of cystitis, and the bladder was very irritable, and I dreaded adding any new irritation in the shape of fragments, and hoped by cutting to remove all source of irritation, and so partially give the bladder immediate relief.

Educated in the doctrines of Markoe, who has so strongly intrenched the median operation, and whom, when his student, I have frequently seen perform this operation with such precision and safety, I decided to perform median lithotomy in preference to the other methods, over which, laying aside such considerations as "ease of operation," which I believe not to rest in any of the different operative procedures for stone, *per se*, but in the dexterity and skillfulness of the operator, it certainly possesses the advantages of less risk of opening up the pelvic fasciæ to urinary infiltration, and the power of retaining and passing the urine at will—reducing the operation as near as may be to lithectasy.

The possibility of dilating the prostatic portion of the urethra without rupture, sufficient for passage of large calculi, is constantly gaining ground in the profession.[1]

The patient being fully etherized and placed on the table, I introduced catheter, and felt the stone; drew off the urine, and injected into bladder some warm water; then withdrawing catheter, I passed the sound, and detected stone lying posterior to prostate—the others present verifying the diagnosis. I then performed the usual median operation, but, owing to the great depth of the perinæum, found considerable difficulty in coming directly down on the staff, but with little extra trouble succeeded in hitting membranous portion of urethra anterior to prostate, and incising this I passed my index-finger into groove of staff, and began a slow, careful dilatation of the prostate portion of the canal.

Haste in this step of operation I found to be hedged with danger and liable to defeat the prime claim of the median operation. I found the prostatic portion quite rigid, but a little time, care, and patience, accomplished the desired object. Withdrawing the finger, I introduced a pair of long lithotomy-forceps, and after a few unsuccessful trials succeeded in catching the stone in its narrow diameter; and, by careful traction, accompanied with rocking motion, extracted it. Owing to depth of perinæum, could insert scarcely tip of finger into bladder, and so used sound to explore bladder for any further trouble, but detected none. The operation was almost bloodless. The patient was then removed to bed, warm flannel placed over abdomen, and morphia given.

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[1] R. F. Weir, New York Medical Journal, April, 1876. "Normal Urethra and its Constrictions," etc.

Stone weighed a hundred and seven and a quarter grains; was two and a half inches in circumference in short axis; three and three-eighths inches in circumference in long axis; composed of nucleus of uric acid, incrusted with mixed phosphates.

Wednesday, 2 A. M.—I was sent for and found the patient suffering great pain in the supra-pubic region; by percussion found the bladder distended. I immediately passed my finger (the handiest instrument) through the wound into bladder, and on withdrawing it there followed a few ounces of urine, and an abundance of clots, certainly an ounce. I then introduced female nozzle of Davidson's syringe, and injected into bladder a solution of salicylic acid in tepid water; this was immediately evacuated with at least ℥ij of clotted blood, and was followed by immediate relief. There being no external hæmorrhage, but the pulse being 102, temperature 120°, I ordered ergot and gallic acid.

12 M.—The oozing still continuing backward into the bladder; has passed frequently a great number of clots; temperature 102½°, pulse 120; tongue heavily coated; patient very weak. I washed out bladder with solution of salicylic acid and cold water; the patient passing from four to five ounces of clotted blood, and then plugged the wound "solid," with lint soaked in liq. ferri subsulph., with orders to remove an hour after if patient desired to urinate. I believe there is no necessity for a drainage-tube for escape of urine after the median operation. Should it become necessary to plug for hæmorrhage, there being perfect retention of urine, there is scarcely a risk of infiltration, and the plug can be removed when the patient desires to micturate.

8 P. M.—Dr. Horton left plug in four hours. On its removal

the patient urinated freely, passing a few clots, and had then a severe chill; pulse 136, temperature 103°; patient very pale; ordered quinine gr. ij every two hours; brandy, ℥j, every fifteen minutes, in water. The pulse gradually became weaker, until it reached 146, thready, and almost imperceptible, and remained so in spite of stimulants so liberally administered, until 1 A. M., when the patient began gradually to improve. By 6 A. M. Thursday pulse was 128, and temperature 102°; passed urine, but no hæmorrhage.

This hæmorrhage, so nearly fatal, came on about twelve hours after the operation (at least manifested itself at that time), was very free (patient losing at least a quart of blood), and toward the end was certainly very rapid. I presume it came from the bulb, as this overlaps the membranous portion of urethra, and is greatly endangered during the operation. Had I plugged at the first alarm of danger, I believe I would have greatly lessened the risk of my patient.

Friday, 5th, 12 M.—Pulse 120, temperature 102°; very weak, but gaining; quinine, milk, and brandy.

8 P. M.—Pulse 94, temperature 102½°, and doing nicely; urine under control of will and there is no hæmorrhage.

From this time forth the patient gradually improved; there was infiltration of blood into the scrotum, which disappeared rapidly under use of muriate of ammonia; passed urine by the urethra on the 13th, but the wound did not heal until the 31st, since which time the patient has been in perfect health.

IV.—*Selected Cases from the Clinique for Diseases of the Throat.* College of Physicians and Surgeons. Reported by Dr. Frank L. Ives, Clinical Assistant.

When we read the statement of so close and experienced an observer as Kohn,[1] that he "has never seen either during life or upon autopsy such specific infiltrations in the mucous membranes of the larynx, etc., as could be correctly classed as true gummata;" when in his excellent *brochure* no mention is found of gummy tumors of the tracheal walls, an omission which is also noticeable in Türck's[1] otherwise very complete chapter upon diseases of the trachea; when a further search through surgical literature fails to find more than slight references to the condition,[2] nothing more than a mere assertion or admission that it may and sometimes does occur; and, furthermore, a remarkable dearth of reported instances, in which it has given rise, as in our case, to serious symptoms—Türck ("Klinik," p. 389); Nicholas Duranty ("Laryngite Chronique," Marseilles, 1865); Norton ("Affections of the Throat and Larynx," p. 86) alone, as far as we can find, detailing such cases—then it appears to us that the following case of gummy tumor, developing in the left wall of the trachea, and giving rise to a marked and dangerous stenosis of that tube, with compression of the left recurrent laryngeal nerve, and paralysis of the corresponding vocal cord, is certainly of sufficient rarity to warrant its presentation in the form of a detailed history, and of enough practical interest to justify its being placed upon record.

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[1] "Die Syphilis der Schleimhaut," etc., Erlangen, 1866.

It is therefore offered as the first of a series of interesting and illustrative cases which will be drawn from time to time from our rich material at the clinic:

On November 20, 1875, M. W., a painter, aged thirty-five, presented himself with the following history: In 1861 he had a chancre on the glans penis, followed by suppurating buboes in both groins, for which he was treated by his physician, and about six weeks later a macular syphilide made its appearance on the body, which in turn disappeared under an appropriate treatment. In 1865 a number of small, hard swellings developed over the line of the sterno-cleido-mastoid muscles on both sides, which later suppurated and broke. In 1866 he had an attack of painter's colic, lasting over three weeks, the paralysis of the extensor muscles of both arms incapacitating him for work for a considerable period. From this time up to April, 1875, he enjoyed comparatively good health. About the latter date he noticed, for the first time, that his breathing was becoming difficult after any exertion, and that it was

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[1] "Krankheiten des Kehlkopfes" (der Luftröhre, p. 493).

[2] Baumler, "Syphilis," p. 160; Ziemssen Cyclopædia, for instance.

"noisy" both in inspiration and expiration; furthermore, that a troublesome, hard, croupy cough was more or less constant. The condition of affairs here described grew progressively worse up to the time that he presented himself at the clinic. During the above period he does not remember ever to have had any trouble with his throat.

At the time of examination, dyspnœa was the most prominent symptom; the breathing was stridulous, both in expiration and inspiration, to a marked degree; the countenance was cyanotic; the voice but slightly affected; general condition fair.

Physical inspection revealed the presence of numerous cicatrices upon both sides of the neck, and upon and in the neighborhood of the genitals. The auscultatory examination showed a slight condensation at the apex of the right lung; at this point prolonged expiration, high-pitched inspiration, and dullness on percussion; everywhere else over the lungs the respiratory murmur is good, being considerably modified, however, in its pitch, by the whistling or stridulous sound which is conveyed into the bronchi from the trachea, and which is heard with equal distinctness over both sides of the chest. The laryngoscope shows the left half of the larynx to be immovable, the vocal cord being fixed at the median line, neither advancing nor receding during phonation and respiration, the opposite cord moves freely; in other respects the larynx, with the exception of a slight catarrhal condition of its membranes, presents nothing abnormal; an inspection of the trachea disclosed a marked narrowing of that tube, the narrowest point being seen about the junction of its upper and middle thirds, and presented a smooth, rounded, reddish protrusion from the left wall inward; the limits of the tumor were ill-defined, and shaded off into the tissues above and below, so that its inner border was alone plainly to be seen, the trachea at this point presenting more or less of an ovoid appearance in its antero-posterior diameter. The history of the patient, the involvement of the left recurrent laryngeal nerve, and consequent paralysis of the left vocal cord, the stenosis of the trachea, and the appearances presented, justified the diagnosis above recorded.

The patient was ordered potass. iodid., gr. xx, hydrarg. biniodidi, gr. 1/8, t. i. d.

December 22d.—The potash increased to gr. xxx, t. i. d.

January 25, 1876.—Since the last record there has been a gradual but steady improvement in the patient's respiration; while breathing quietly the stridor is hardly noticeable; the cough is less troublesome; the vocal cord still immovable: treatment continued.

February 14th.—Inspection of the larynx shows that the left vocal cord, before immovable, is decidedly abducted during inspiration, and advances to the median line in phonation. Stridor has entirely disappeared, and the patient expresses himself as being very much better. Iodide of potash discontinued, and tonics substituted. Two weeks later, the potash was resumed in ten-grain doses, t. i. d., and patient told to report himself again after a short time.

June 16th.—He made his appearance for the first time since the last report; gives as an excuse that he had returned to his work. He reports steady improvement as far as his rational symptoms are concerned.

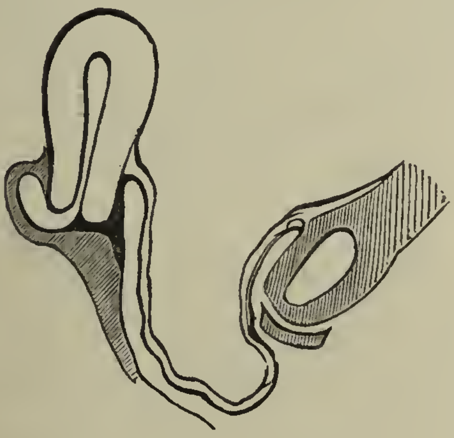
A laryngoscopic examination shows that the vocal cord is freely movable, and that all evidences of tracheal stenosis have disappeared; the respiration is uninterrupted and easy; some cough still remains. Patient discharged cured.

Notes of Hospital Practice.

WOMAN'S HOSPITAL, NEW YORK.

Prolapse of the Bladder through a Vesico-Vaginal Fistula; Adhesion of the Posterior Wall of the Vagina to the Anterior Lip of the Uterus.—A case of vesico-vaginal fistula entered the service of Dr. Emmet, and was of considerable interest, inasmuch as at a preliminary examination there seemed to be total destruction of the uterus. When the finger was passed into the vagina a prolapse of the fundus of the bladder was encountered, but, on continuing the exploration, no sign of the uterus could be either felt or seen. When, however, the finger was passed into the rectum, a body resembling the uterus could be made out, and on close examination a small orifice could be detected which allowed the probe to pass into a sac. This sac proved to be formed by a reduplication of the posterior wall of the vagina united to the anterior lip of the uterus. The condition of the parts will be more readily appreciated by referring to Fig. 1. The orifice previously referred to existed on the line of union between the lip of the uterus and vagina. It is indicated by Fig. 2, *A*. The fistula was very large, extending from one ramus to the other, and involving the base and neck of the bladder as well as the inner third of the urethra.

FIG. 1.



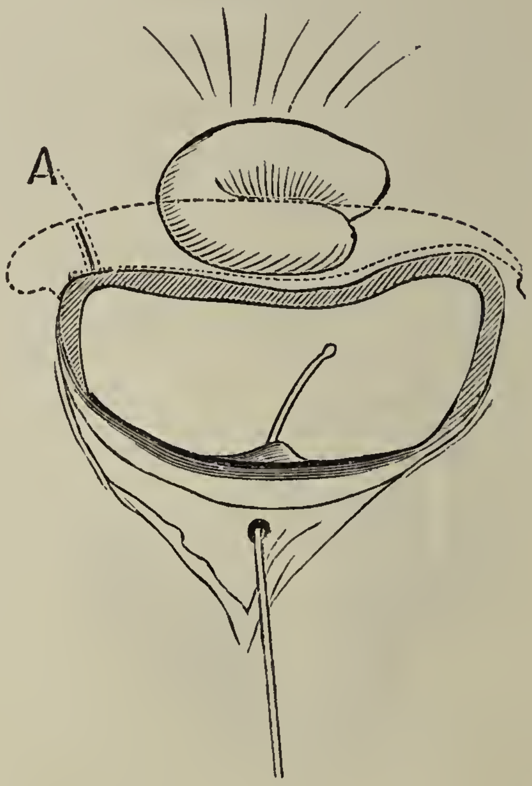
The history obtained from the patient was as follows: She was the mother of twin children, and had never suffered from any difficulty till the birth of the last child. Shortly after the labor, which lasted for twenty-four hours, she noticed that she could not retain her water. This condition remained with but little change till she entered hospital. Dr. Emmet, after a careful examination, recognized the condition of the patient to be as above recorded.

She was placed upon five-grain doses of benzoic acid three times a day, to remove the phosphatic deposit, and at the same time given vaginal injections of hot water, till she was considered in a proper condition for operation.

The first operation consisted in separating the vagina from the anterior lip of the uterus and posterior edge of the fistula.

At this stage of the operation, Fig. 2 gives a correct idea of the appearance of the parts. The neck of the uterus was deeply lacerated on the right side, and the posterior *cul-de-sac* was filled with cicatricial bands; these are not shown in the engraving.

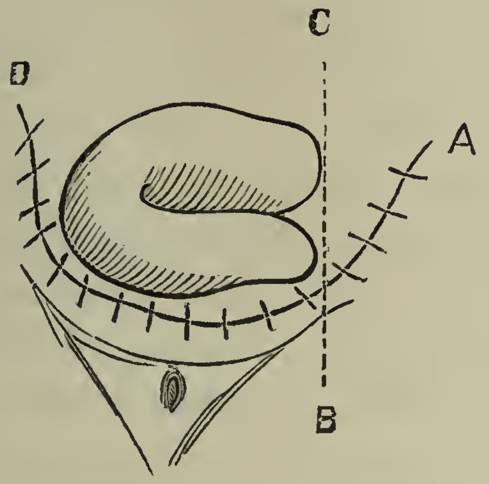
Fig. 2.



The dotted line shows the site of adhesion of the vagina to the cervix, and at *A* is seen the point where the fistula passed into the sac shown in Fig. 1. The operation was completed by dividing the bands in the *cul-de-sac*. This allowed the cervix to be brought down to the neck of the bladder, and, after the edges of the fistula were denuded, it was united in this position by sixteen sutures. Fig. 3 shows the line of union, *A D*, which measured over three inches. After nine days the sutures were removed and union found to be complete, with the exception of a small opening sufficiently large to admit a probe. This occurred at the intersection of the line *A D* with *B C*.

She was then discharged and returned to her home, but re-entered hospital last fall. She said that for some months after leaving the hospital she was perfectly dry, but that afterward urine would pass away when she was in an upright position. She retained her urine, however, when in bed. The opening would seem to have been high up, for no water passed away until an hour after she had emptied her bladder.

FIG. 3.



On examination, after return to hospital, it was found that a fold existed in the vagina, indicated by the dotted line *B C*, which formed a pouch three-fourths of an inch in depth. This pouch extended posteriorly and to the right, and contained in it a fistula at *A*. The fistula could only be made out by injecting the bladder with six ounces of cochineal-water, when it was found that the water welled up from the bottom of the pouch. The bottom of the pouch was tightly bound down, and could not be brought into view, and when the finger was carried into it no evidence of fistula could be detected even with a probe in the bladder.

The vaginal fold *B C*, Fig. 3, was formed by contraction of that part of the posterior wall of the vagina which had been attached to and dissected off the cervix, and by contraction of the divided surface in the posterior *cul-de-sac*.

It is now proposed to defer any operation till all contraction has ceased, and then, should the fistula not be closed by that process, the bands will be divided, and the bottom of the pouch brought into view.

The case is not only interesting, but renders manifest the care with which every case should be investigated, no matter how seemingly hopeless it may appear at first sight.

BELLEVUE HOSPITAL.

Report of Case presented at the Pathological Society.—The case of amputation of thigh for aneurism of the anterior tibial artery, reported at the Pathological Society by Dr. Janeway (JOURNAL, April, page 407), did very badly for a time, but at present looks as if recovery would take place. Secondary hæmorrhage took place on the eleventh day after the operation, and again on the nineteenth day after the first hæmorrhage. The bleeding on the first occasion was noticed as a small oozing, which, on exploration, burst out in a full jet. It was restrained, however, by direct pressure. On the second occasion the patient felt the blood escaping from the flap, and compressed the femoral till assistance reached him. The artery was then tied, and the shot-bag apparatus (*see* Hospital Notes of last number) applied to modify the arterial pulsation. At the present writing twelve days have elapsed since the last hæmorrhage.

Fracture of the Thigh in a Patient with Anchylosed Knee.—A patient, having a knee anchylosed at right angles, entered hospital for the treatment of a fractured femur—the fracture being at the lower third. The flexure of the knee at right angles made it impossible to use either the inclined plane or the ordinary extension apparatus; but, by making extension and applying the plaster-of-Paris splint, a good result was obtained.

Pistol-Shot Wound of Chest; Circumscribed Pleurisy.—A woman was shot with a pistol-bullet in the back. When she was taken into hospital an opening was found leading down to the pleura. This opening was enlarged, but no trace of the bullet could be discovered. A circumscribed pleurisy developed, and, although pus was formed, the inflammation was confined to a small area of the pleura. Eventually the sinus healed, leaving the bullet imbedded either in the pleura, lung, or neighboring tissues.

CHARITY HOSPITAL.

Aneurism of the Aorta.—A patient entered Charity Hospital suffering from cardiac disease and suspected aneurism. A *bruit*, of a rather indistinct character, was heard. The main reason for diagnosticating aneurism was paralysis of the vocal cords. At the autopsy, it was found that there was a small aneurism at the base of the aorta, but so small as to give serious doubts as to whether it gave rise to a *bruit*. The interesting feature of the case, however, was that the paralysis of the vocal cords was due to an enlarged lymphatic gland, which pressed on the recurrent laryngeal nerve, and in this manner gave rise to the laryngeal symptoms.

Aneurism of Innominate Artery.—A patient entered hospital, suffering from aneurism of the innominata, characterized by a pulsating tumor at the sterno-clavicular articulation. The patient was placed in bed, and given solid food to as great an extent as possible. The heart's action was controlled by the use of the tincture of aconite. After three months' treatment the tumor diminished nearly one-half, and offers a fair prospect of complete cure, without having recourse to any surgical interference.

Correspondence.

THE DOME-TROCAR.

St. John, New Brunswick, Canada, *April* 9, 1877.

Editor New York Medical Journal:

In an article on "Paracentesis of the Pericardium," by John B. Roberts, M. D., in the April number of the New York Medical Journal, the writer, after saying, "Fitch's dome-shaped trocar was suggested as giving a valuable principle if the instrument could be made small enough, and could be applied to the aspirator," adds that he (Dr. Roberts) has had made a cylinder an eighth of an inch in diameter, within which slides a canula, made flexible by a spiral, and when it is thrust out it curves downward.

Now, if the inner canula be made flexible by a spiral, or by any other means, it will be, if permeable, too bulky to enter a cylinder sufficiently small for an aspirator-needle. The withdrawal of the inner tube, as suggested in case of its getting plugged up, would be very objectionable during tapping of the pericardium, for the sharp point and edge of the outer canula would be thus left exposed to the beating heart; I think all this is provided against in the dome aspirator-trocar by a process beneath the proximal third of the large fenestra on the underside of the inner canula, near the dome.

The dome aspirator-needle has been doing good work in many hands during the last two years. The sizes correspond, in calibre and weight, with Dieulafoy's needles, but the two tubes—both of thin steel—fitting together are stronger than a single tube of similar weight, and, when the cutting-point of the outer canula enters a cavity, the inner dome is projected, and the end of the combined instrument is perfectly smooth, like the end of a probe, with which the interior may be explored without danger of puncture or scratch to the lining of the cavity or any contained or contiguous parts, while the large open fenestra on the underside gives free exit to the fluid.

This dome-needle is very safe in many important aspirations where the point of the ordinary needle, or the sharp edge of the open canula, would be very hazardous, e. g., in chronic hydrocephalus, in spina bifida, *hydropericardium*, hydrothorax, tympanitis, strangulated hernia, retention of urine, and fluids in or near the joints.

A full description of these aspirator dome-trocars may be found in the NEW YORK MEDICAL JOURNAL for April, 1875.

SIMON FITCH, M. D.

Proceedings of Societies.

PATHOLOGICAL SECTION OF THE KINGS COUNTY MEDICAL SOCIETY.

November 9, 1876.

The President, Dr. GIBERSON, in the Chair.

DR. GEORGE R. FOWLER presented a specimen, with the following history:

Mrs. B., aged fifty-seven; in fair health. First noticed seven years ago a small tumor situated over the left inguinal canal. This growth gradually and painlessly enlarged, until two weeks ago, when its summit ulcerated and bled freely.

Becoming alarmed, she sought advice, and Dr. Fowler found a tumor four inches in length, three inches in breadth, elevated two and a quarter inches above the surrounding integument, situated on a broad base, being freely movable, and involving only the superficial tissues. It was made up of several nodules of stony hardness, some sessile, others pedunculated. Immediate removal was advised, and operation performed on the afternoon of November 9th, by an elliptical incision. Hæmorrhage was slight, and the patient bids fair to make an excellent recovery.

Dr. Westbrook presented, as a curiosity, a collection of gall-stones, seventy-nine in number, removed from the gall-bladder of a lady, aged seventy. The history was imperfect, but she had had jaundice and persistent vomiting, and apparently died of exhaustion. At the autopsy, cancer, involving peritonæum and pelvic viscera, was found, with a fatty liver, and the gall-bladder full of gall-stones, one of which occluded the cystic duct.

The President called the attention of the members to a collection of gall-stones, presented to this section a few years since, which numbered over thirteen hundred.

Dr. J. H. Hunt presented a heart and heart-clot, with the following history:

Mrs. W., aged thirty-five, in good health a few hours previous, was found in bed at 6 p. m. in a profound stupor, amid external surrounding evidences indicating a brutal assault, and probable previous drugging.

Dr. Hunt saw her a few minutes after, when her condition was as follows:

Respiration stertorous, with pin-hole pupils and relaxed muscles. Her breath smelt strongly of both opium and alcohol, and her stupor was too profound to respond to any amount of shaking and bastinading. With the assistance of Dr. Crutchley, a stomach-pump was used to evacuate the contents of her stomach, which were replaced with a strong decoction of coffee, and three minims of the fluid extract of belladonna was injected into the arm. After half an hour, during which her condition was unchanged, the stomach was again emptied and fresh coffee injected, the manœuvre being repeated every half-hour. After two hours the belladonna was repeated, and the pupils began slowly to dilate, but only after four hours continuous labor was the first sign of returning consciousness observed. About midnight severe subsultus tendinum appeared, with a temperature rising from below normal to 102°. The bladder was evacuated with a catheter, obtaining over a quart of urine, smelling strongly alcoholic. At 2 A. M. the subsultus had increased to actual convulsions, controlled by inhalation of chloroform, chloral and bromide of ammonium being given by the mouth, but not until after 4 A. M. did she remain conscious long enough to talk coherently. During that day her temperature went down, subsultus ceased, and her mind became quite clear. The following morning, however, her temperature rose, and she complained of severe pain all over her body, especially over the abdomen, which soon became tympanitic, and the patient preferred to lie with her knees drawn up. The thoracic and abdominal hyperæsthesia was too great to allow careful examination. There was occasional slight cough, which she said had existed for two weeks, but there was no marked expectoration. Her temperature was above 101°; pulse rapid and dicrotic, and at times intermittent.

Several experienced gentlemen saw the case in consultation, and considered it one of peritonitis.

Unfortunately, the thorax was not thoroughly examined, owing to the absence of symptoms referable to it, and to the patient's hyperæsthesia and irritability.

Patient did well till the fourth day, when, shortly after the morning visit, she failed suddenly, and died in three hours, her mind remaining clear to the last.

At the autopsy, on the following day, the peritonæum was found entirely normal; upper lobe of right and two-thirds of the left lung pneumonic, partly red, partly gray, hepatization; the liver, heart, and kidneys, were fatty. On removing the heart, a clot, strong, firm, and evidently *ante-mortem*, was found attached to the left ventricle, passing through the aortic valves, and sending prolongations into the coronary, right and left subclavian, and carotid arteries; being over eighteen inches long, not including branches. A similar clot was found in the right side of the heart, but unfortunately destroyed before being noticed. As the head was not examined, the presence of embolism can only be conjectured. The points of interest seem to be, first, the presence of the signs of peritonitis without peritonitis; and, second, the easy overlooking of a severe case of pneumonia by careful and competent practitioners.

Dr. JEWETT remarked that peritonitis in its congestive stage only might have been present in this case, thus leaving no signs at the autopsy.

Dr. SHERWELL thought that heart-clots would be often met with, if autopsies were common in cases of pneumonia. In connection with the treatment for opium-poisoning, he would refer to a case of his own—a child, aged three years, who took one grain and a half of morphia. Case was not seen till forty minutes after the drug was taken, and died in sixteen hours, apparently of cerebritis. Electricity was used, with one-sixtieth of a grain of atropia and brandy hypodermically.

Dr. SNIVELY had treated a case of suicidal poisoning by morphia in a young lady, where electricity brought the respirations from 4 to 18, but the patient finally died from exhaustion.

The SECRETARY regretted that the thrombus of the pulmonary arteries had not been more carefully examined, as it was probably sufficiently extensive to cause death. As there was no paralysis, cerebral embolism might be excluded.

Dr. SEGUR had seen a young babe poisoned by morphia. The child was doing well, breathing naturally, wide awake, and supposed to be out of danger. Being left for a few minutes, it went to sleep, and could not be roused. This accident was worth remembering, for it might occur to others.

Dr. Sherwell had left his patient at 8 P. M., doing well; found it worse at ten, and gave brandy and the battery. The child improving, was left by Dr. Sherwell for a few moments, and was found on his return in a dying condition.

Dr. Jewett had lost a case of pneumonia, where death was instantaneous.

Dr. Hunt referred to a case reported in the *Obstetrical Journal of Great Britain and Ireland*, September, 1876, where death occurred in ten minutes, with symptoms of asphyxia. At the autopsy extensive pulmonary thrombosis was found, the lungs being otherwise normal.

Dr. Westbrook had seen a case where a man, doing well after pneumonia, and straining at stool, developed sudden hemiplegia from embolism of the left middle cerebral artery, but is gradually recovering.

Dr. Hunt remarked, in conclusion, that his patient had been addicted to the abuse of stimulants and narcotics for years, but, on regaining consciousness, denied having knowingly taken opium on that occasion. It was therefore possibly mixed with the stimulant by her drunken paramour.

N. B. Sizer, M. D., *Secretary.*

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 15, 1877.

Dr. S. S. Purple, President.

Is Tracheotomy in Diphtheritic Croup justifiable?—Dr. Charles A. Leale opened the discussion by reciting several cases in which he performed the operation in children, and referred to the case of a man suffering from œdema of the glottis. The patient had ceased to breathe before Dr. Leale reached him; but, still, as there was feeble pulsation of the heart, the trachea was opened, and artificial respiration practised. After a short time natural respiration was established, and the patient recovered completely. After a *résumé* of the different authorities on the subject of diphtheritic laryngitis, Dr. Leale offered his opinion that an early operation was not desirable, for the reason that many cases left to themselves recover. On the other hand, he thought that tracheotomy was perfectly justifiable in cases where there was danger of death from dyspnœa.

Dr. SAYRE referred to several cases in which he had performed the operation.

Dr. JOHN C. PETERS read some statistics, giving the different results which had been obtained in different countries.

SURGICAL SECTION.

March 23, 1877.

DR. STEPHEN SMITH, Chairman.

Plaster-of-Paris Jacket in Lateral Curvature of the Spine.—Dr. LEWIS A. SAYRE read a short paper on lateral curvature of the spine, and demonstrated the method of applying the plaster-of-Paris splint to the body. He quoted the following paragraphs from the paper read by Dr. A. B. JUDSON before the Academy last year:

"The distinguishing feature of the explanation of rotation here proposed is the recognition of the fact, previously overlooked, that the posterior part of the vertebral column, being a part of the dorsal parietes of the chest and abdomen, is confined in the median plane of the trunk, while the anterior part of the column, projecting into the thorax and abdomen, and devoid of lateral attachment, is at liberty to, and physiologically does, move to the right and left of the median line."

"In lateral curvature would not a degree of relief be afforded by a similar application (referring to treatment of Pott's disease) of antero-posterior force, by which a part of the weight would be transferred to the posterior portion of the spinal column, which is prevented by its muscular and fibrous attachments from deviating far from its normal position?"

Dr. Sayre said that he would answer Dr. Judson's query by saying that the weight of the body should be transferred from the bodies of the vertebræ and sustained by the inequalities found on the entire trunk; and, moreover, such transference could be readily accomplished by means of enveloping the chest and abdomen in a plaster-of-Paris apparatus.

Dr. Sayre said that Dr. MITCHELL, of Philadelphia, many years ago, practised the method of treating lateral curvature of the spine in children, by causing them to suspend themselves several times every day. The method fell into disuse, but was revived by Dr. Benjamin Lee, of Philadelphia. So far as the principle of treatment was concerned, there could be no doubt of its value, and by means of an immovable apparatus, an additional element of treatment could be introduced which marked a decided advance in orthopedic surgery.

The best results were derived by suspending the patient by the occiput and chin; but, in case this was not expedient, partial or complete extension could be obtained by passing a sling around the axillæ.

The apparatus and method exhibited by Dr. Sayre consisted of a tripod with pulleys attached, and when the patient was suspended, the plaster bandage was placed around the trunk, extending from the armpits down to and embracing the ilium on either side. After the patient was suspended for ten or fifteen minutes, he was taken down and laid on an air-mattress till the plaster became thoroughly hard. He was then in a condition to get up and put on his clothes. Previous to putting on the plaster, a closely-fitting, knit-cotton shirt was placed on the body. In cases where the deformity was high up in the cervical region, an additional apparatus was used for suspending the head. It consisted of an "outside jury-mast" of malleable iron, which was attached below to perforated strips of tin, and from above there depended a hook. The strips of tin were laid on the upper part of the back, and secured in position by successive layers of plaster bandage. To the hook above referred to a leather head-piece was attached, and in this manner any amount of traction could be made upon the head and neck.

In conclusion, Dr. Sayre said that the plaster apparatus in diseases of the spine was within the reach of any practitioner. It gave the best method hitherto devised for keeping the weight of the trunk off of the diseased or weakened vertebræ; and, finally, it caused less discomfort than any other apparatus.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 28, 1877.

Dr. E. G. Janeway, President.

Report of Microscopical Committee.—Dr. J. A. McCreery reported that the tumor of the soft palate, presented by Dr. A. H. Smith, proved to be an adenoma.

Epithelioma of Penis.—Dr. R. F. Weir presented on behalf of a candidate a specimen of epithelioma of the penis. The patient was thirty-seven years of age. Last October he noticed that pus was escaping from the prepuce, and as it was very much contracted, circumcision was practised. It was found that a warty growth existed around the glans. On February 1, 1877, this growth was much enlarged, and closely resembled a sloughing chancroid. It was considered best to amputate the penis, and at the operation the urethra was stitched to the skin of the penis, in order to prevent contraction of the meatus. Although the penis was removed close to the body, it was found that, during erection, it protruded about two inches. Dr. Janeway referred to a case in which an epithelioma closely resembled a sloughing chancroid at first, though the difference was quite distinct at a later period of the disease.

Necrosis of the Femur.—Dr. Weir also presented a specimen of necrosis of the femur. The disease was the result of a gunshot-wound, and required amputation of the limb.

Syphilitic Disease of the Testicle.—Dr. S. W. Wright presented a specimen, and gave the following history: The patient was forty-seven years of age, and single. Ten years ago he noticed a sore on the prepuce, and three or four months later an eruption appeared on the body. He was seen six years subsequently, when an ulcer was found on the posterior wall of the pharynx. This improved under the use of bichloride of mercury and iodide of potassium. Six months subsequent to this the right testicle enlarged, till it measured ten inches in circumference. In spite of strapping and constitutional treatment, it passed on to ulceration and sloughing. Amputation was performed, but the patient made a bad recovery, having an abscess form in the inguinal canal. Six months ago the left testicle enlarged, and on examination a hydrocele was detected. This was tapped every two weeks for a time, but eventually the testicle was removed. On examination it was found to be large and hard, and on the anterior surface was a gummy tumor.

Deformity simulating Dislocation of the Femur resulting from Morbus Coxæ.—Dr. Gibney presented the head of the left femur, with the neck united at right angles to the shaft. The boy was aged eleven, and on examination presented evidences of dislocation of the femur on the dorsum of the ilium. The child was healthy till he was six years of age; at that time he had a fall, which was the starting-point of the disease. An examination showed that there had been softening of the neck of the femur, with resulting deformity, the head being united to the neck at an acute angle. The greater tuberosity of the femur became from this cause unduly prominent. The joint was anchylosed, and embraced by a firm involucrum. Dr. Sayre said the specimen proved that destruction of the bone could take place without any abscess resulting. Dr. Gibney was of the opinion that, had the patient lived, it would have been a good case for operation.

Tubercular Meningitis.—Dr. Janeway presented a brain which he had removed from a patient in Bellevue Hospital. The man was thirty-six years of age, and on admission to the ward was suffering from the third stage of phthisis. Some days afterward he began to suffer from headache, and subsequently had otitis media for three months. Eventually the mind became impaired, the pupils dilated, and there was contraction of the abdomen, with constipation. The pulse became slow for three days. The temperature was normal till the day before death, when it rose to 101¼°. On examining the specimen, there were evidences of basilar meningitis, with the presence of tubercles. Dr. Janeway said that it was the second case in six months that had been under observation in Bellevue Hospital.

Stated Meeting, April 11, 1877.

Dr. E. G. Janeway, President.

Abdominal Tumor, malignant.—Dr. Francis Delafield presented for a candidate a specimen of malignant tumor, having its origin in the lumbar glands of the abdomen. The patient was aged thirty-three, and an inmate of Roosevelt Hospital. No malignant history could be traced in the family. The prominent symptom in the early part of the disease was pain in the lumbar region, but not so severe as to prevent him from attending to his duties up to March, 1876. Last fall he entered hospital suffering from a tumor in the lower part of the abdomen. This was slightly movable, and thought at the time to be retro-peritoneal. On November 30th hæmorrhage took place from the bladder, and on February 19th œdema of the leg occurred. The urine contained hyaline casts.

Autopsy.—The abdomen contained a tumor, situated behind the peritonæum, and attached to the four lower lumbar vertebræ. It involved the duodenum, and was attached to it. The liver and spleen were normal, but the pelves of the kidneys were dilated. The aorta was not implicated. The tumor involved the lumbar glands, and in structure was apparently on the border-line between connective tissue and epithelial tumors.

Adenitis.—Dr. Delafield also presented the history of an Italian, thirty-five years of age. He entered Roosevelt Hospital during September, 1876. Fourteen months previously he noticed a lump on the right side of the neck. On October 12th he complained of pains in the left leg and thigh. The blood was examined on December 6th, but nothing definite was discovered. The glands continued to increase in size, and on March 26th he was attacked with diarrhœa, which could not be controlled. Death took place on April 8th.

Autopsy.—The body was emaciated. The brain was not examined. The glands of the neck in the neighborhood of the trachea were much enlarged, but did not compress either larynx or trachea. There were no enlarged glands in the thorax. The liver was enlarged and waxy. The spleen was small. The rectum was ulcerated, and presented on its surface fibrine.

Condition of the Organs of the Body in Extreme Age.—Dr. Andrew H. Smith presented specimens taken from a man aged one hundred and five years. He had been an opium-eater, and when he was ninety years old took one and a half drachm of gum-opium daily. He was exposed on January 28th to a storm, and contracted an attack of congestion of the lungs, which lasted forty-eight hours. From this he partially rallied, but never recovered his usual health. Two weeks before death the right thigh began to enlarge, owing to the formation of an abscess. The aspirator-needle was introduced, and eighteen ounces of pus withdrawn. The patient died on April 3d. At the autopsy the abscess was found to be caused by three cysts, which had suppurated. An elastic tumor was found in the abdomen, which was about the size of a child's head. It contained friable material, closely resembling broken-down hepatic tissue. The right kidney was absent, and in its stead a cystic tumor was noticed. The left kidney was contracted, yet the patient never suffered from any symptoms which indicated renal disease. A cyst existed in the substance of the liver, which contained serum. The heart was fatty, but no valvular disease could be made out. The ribs had changed in structure to such an extent as to be readily cut with a scissors. The integument was much softened, and could be readily lacerated.

Dr. Gibney saw the patient about a month before death, and found that he was then taking about forty-five grains of the crude opium every day.

Floating Cartilage in Knee-Joint; Removal.—Dr. W. T. Bull presented a specimen of cartilage which he had removed from the knee-joint. The patient was a man twenty years of age. The wound was closed by catgut sutures, and healed without any unfavorable symptoms.

Urethral Calculus.—Dr. Erskine Mason presented two calculi which he had removed from a man aged thirty-one, at Roosevelt Hospital. He had been operated on four years ago for stricture of the urethra, by Dr. Eager, and two years ago he entered Roosevelt Hospital, but at that time no operation was performed. He reëntered Roosevelt Hospital November 17, 1876, suffering from stricture and perineal fistula. December 5th a calculus was detected at the peno-scrotal junction, but the attempt to dilate the urethra by means of the forceps proved unsuccessful. Perineal section was performed, in which two strictures were divided and two calculi removed. One of them weighed three grains, the other measured one inch in length and weighed twenty grains.

Perforation of the Meninges of the Spinal Cord by an Abscess.—Dr. Satterthwaite presented a specimen of caries of ilium and sacral vertebræ, in which the abscess penetrated the meninges of the cord, and caused cerebro-spinal meningitis. A man aged thirty-four entered the Presbyterian Hospital December 24, 1876. Eighteen months previous he noticed a swelling on the upper and posterior portion of the spine. This continued for eight weeks, when it opened and discharged a considerable amount of pus. Disinfectant solutions were employed, but without any benefit. Eroded bone was discovered, and sponge-tents were used to enlarge the opening, but without much success. When he was admitted to hospital it was noticed that he walked like a drunken man. January 2d, patient complained of pain along the region of the spine. January 3d, delirious. January 4th, patient sank, and died about 6.30 P. M.

When he entered hospital it was supposed, as afterward proved to be correct, that the patient had a lumbar abscess. This was washed out with disinfectant solutions, but shortly afterward symptoms of meningitis manifested themselves. At the autopsy, an abscess was found to exist in the lumbo-sacral region. The first bone of the sacrum was involved in the disease, and on close examination an opening about a fourth of an inch in diameter was found situated between the fourth and fifth sacral vertebræ. This opening penetrated the spinal canal, and allowed the pus to pass into the meninges of the cord. Lymph and pus were found in the meninges of the cord, and over the convexity of the anterior surface of the brain.

Meningitis from Pott's Disease.—Dr. Satterthwaite also presented a specimen of cancer of the vertebræ, in which pus passed into the spinal canal; but did not penetrate the meninges. Meningitis took place from contiguity, as no sign of an opening could be detected in the dura mater.

Bibliographical and Literary Notes.

ART. I.—*The Medical and Surgical History of the War of the Rebellion.* Part II., Vol. II. *Surgical History.* Prepared under the Direction of JOSEPH K. BARNES, Surgeon-General, United States Army, by GEORGE A. OTIS, Assistant Surgeon, United States Army. First Issue. 4to, pp. xii–1024–xx. Washington: Government Printing-Office, 1876.

THE "Medical and Surgical History of the War of the Rebellion," when completed, is to consist of six ponderous volumes, three of which are devoted to the consideration of surgical cases. The work is divided into three parts, each part consisting of a volume of medical history and a volume of surgical history. The volume before us is the surgical volume of the second series, the corresponding volume of the third series being forthcoming.

We have in this volume four chapters describing and tabulating the following classes of injuries: In Chapter VI. are presented the cases of injuries of the abdomen, occupying somewhat over 200 pages. In this chapter 8,538 cases of wounds of the several abdominal organs are tabulated, of which there are 610 records of detailed abstracts. In Chapter VII. we have the cases of injuries of the pelvis enumerated, 3,100 in all, with details of 610. This chapter occupies about the same space as the preceding. Next is a short chapter on wounds of the back, in which are tabulated 12,681 cases of shot flesh-wounds, two of which are detailed. The remaining chapter (IX.) begins the report of gunshot injuries of the extremities; those of the upper extremity, however, are included in this section. This chapter is very elaborate, occupying nearly 600 of the large 4to pages, giving 88,741 cases (55,086 cases of flesh-wounds, and 33,655 of fractured wounds), and furnishing details of 817 cases. In addition to the cases of detailed abstracts are incidental descriptions of those cases which seem of more than ordinary interest; such as required excisions, amputations, etc.

The class of cases reserved for consideration in the surgical volume of the third part bids fair to make that volume of even more interest, if possible, than the one before us.

In the first chapter of this volume (VI.), we are led to notice the marked fatality of penetrating wounds of the abdomen, and draw something of a contrast between them and those of the pelvis. More than three-fourths of the cases of penetrating wounds of the abdomen proved fatal, while nearly the same proportion of cases of penetrating wounds of the pelvis terminated in recovery, excluding cases in which the bladder was perforated in the portion covered with peritonæum. In looking over the immediate causes of death in these classes of injuries a similar contrast may be observed: in the former, it may be noticed that peritonitis is the principal cause of death; in the latter, purulent infiltrations, cellulitis, and pyæmia, seem to be the most frequent source of the fatal termination. In the treatment of penetrating wounds of the abdomen, absolute rest (avoiding, as far as possible, removal of the patient from the scene of the accident) and opium are the principal measures recommended. Warm poultices did not seem to effect much good; "but extended and protracted applications of ice over the entire abdomen were believed, in some instances, to have exerted a decided influence in moderating inflammation." In the event of a rupture of the intestine or stomach, it is recommended to enlarge the wound, cleanse the cavity, and unite the edges of the wounded organ. The question of cutting down and doing a similar operation in cases of rupture without an external wound existing, is adverted to, the author seeming to favor the procedure.

In speaking of the comparative mortality in pelvic wounds, we excluded those cases in which the bladder was ruptured in the part over which the peritonæum deflects. An analysis of the cases shows that when the lesions are limited to the portions of the bladder uninvested by peritonæum, they, for the most part, heal readily. Fistulæ sometimes occurred, communicating with the rectum or cutaneous surface, but no instance was observed during the late war of a fistulous communication with the small intestine. Extravasation of urine into the peritoneal cavity invariably caused death. Cases of gunshot-wound of the bladder were frequently complicated by the presence of projectiles, or bits of cloth or bone, either in the walls or cavity of the bladder. If the bladder was tolerant of these, so that cystitis did not ensue, they frequently became the nuclei of calculi. Pieces of cloth are less liable to become the nuclei of phosphatic concretions than pieces of bone, or leaden or iron missiles. Hair is about as frequently the seat of a calculus as cloth. In respect to the results of operative procedures for stone so caused, we make the following quotation (pp. 281, 282):

"In the twenty-one foregoing lithotomy operations, seventeen were successful, three fatal, and in one the result has not transpired. Of thirteen cases in which missiles were removed, there were ten in which there were leaden bullets, three of the round and seven of the conical variety; six of the ten balls were very slightly incrusted, while four formed the nuclei of large stones. In three cases the projectiles were of iron, a canister-shot, a grenade-fragment, and an arrow-head, all coated with thick calcareous depositions. In eight cases in which bone, cloth, hair, or soft organic matters had constituted the nuclei, the calculi were of medium or large dimensions, and commonly very friable. In six cases of this last series, of what may be termed traumatic calculi, there were no obvious contraindications to lithotrity. In all of the incrustations and concretions, the ammoniaco-magnesian phosphate prevailed, and several were almost exclusively composed of this triple salt; in others, phosphate of lime, urates, and organic matters, were present in limited proportions. The remark of Marcet,[1] that vesical concretions of this sort are uniformly of the *fusible* species—composed, that is, of nearly equal proportions of phosphate of lime and of the triple phosphate of ammonia and of magnesia—is not sustained by my observations, which rather tend to show that, in such concretions, the bone-phosphate is often altogether absent, and that the triple phosphate uniformly predominates."

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[1] Marcet, "An Essay on the Chemical and Medical Treatment of Calculous Disorders," 1817, p. 25.

In the treatment of gunshot-wounds of the bladder, the compiler is in accord with eminent authorities when he recommends the continuous maintenance of the catheter in the bladder, removing it once in two days. Injections are at the same time employed. Opium internally constitutes the medicinal treatment.

The fatality of wounds of the gluteal artery is remarkable. In the event of a partial division of the artery, as it would seem is often the case, so that compression does not permanently control the hæmorrhage, the difficult operation of tying the vessel above and below the seat of the injury is very properly insisted on.

A considerable space is devoted to the consideration of wounds of the urethra. The author advises to insert a catheter whenever practicable, and to retain it *in situ*. It should be inserted before the urine is voided if the patient is seen sufficiently early. The question of retention of the catheter in these injuries is discussed somewhat, many eminent authorities being reviewed, and the conclusion is reached that in anti-scrotal laceration of the urethra, assuming that the catheter can be passed to the bladder, "it will be prudent to let a full-sized gum-elastic catheter remain for twenty-four hours, and then introduce such a catheter as can be passed with the least inconvenience, whenever the patient desires to urinate, until cicatrization has so far progressed that the contact of urine is no longer irritating. The reintroduction of an instrument can rarely present serious difficulty when the laceration is in the penal portion of the canal. . . . When a shot-wound involves the bulbous or membranous portions of the urethra, the problem is more complex. The dangers from protracted retention of a catheter, and the difficulty of replacing when withdrawn, are alike augmented. It is generally calculated that, in such cases, a catheter should be left in, unless its presence induces intolerable irritation, until cicatrization has fairly commenced." Another course is mentioned :

when the catheter occasions discomfort, it may be withdrawn and replaced over a filiform bougie.

Traumatic stricture is pretty well discussed; descriptions of instruments with figures are given, together with a tolerably full mention of contemporary authorities.

The work is not only rich in details of cases to illustrate all classes of injuries of the parts of which it treats, but either in the text or foot-notes all practical considerations connected therewith are lucidly brought out. It is embellished with numerous woodcuts, many of which are very good, and many fine photographic and a few lithographic plates. It is with some regret that we take leave of this volume. It abounds in subjects for discussion, but we have, perhaps, said enough to give the reader an idea of its scope and character, and we have chosen to be more exegetical than critical. The work is, perhaps, too voluminous for a readable book, but it is invaluable for reference. We should be glad if a sufficient number of copies could be printed and furnished at moderate cost, to enable as many of the profession as may be disposed to secure the entire work.

ART. II.—*Cyclopædia of the Practice of Medicine.* Edited by Dr. H. VON ZIEMSSEN. Vol. VII. *Diseases of the Chylopoëtic System, together with the Chapters on the Diseases of the Naso-Pharyngeal Cavity and Pharynx, Laryngitis Phlegmonosa, Perichondritis Laryngea, Ulcerations and Tumors, and Neuroses of the Larynx.* By Prof. HERMANN WENDT, of Leipsic; Prof. W. LEUBE, of Jena; Dr. O. LEICHTENSTEIN, of Tübingen; Prof. ARNOLD HELLER, of Kiel; Prof. H. VON ZIEMSSEN, of Munich; and Dr. A. STEFFEN, of Stettin. Translated by A. V. MACAW, M. D.; E. W. SCHAUFFLER, M. D.; A. B. BALL, M. D.; L. A. STIMSON, M. D.; J. SOLIS COHEN, M. D.; and A. VON HARLINGEN, M. D. A. H. BUCK, M. D., Editor of American edition. 8vo, pp. xiv–1046. New York: Wm. Wood & Co., 1876.

VOLUME VII. opens with the contribution of Wendt, on "Diseases of the Naso-Pharyngeal Cavity and Pharynx," embracing somewhat over a hundred pages. The following section, by Leube, is entitled "Diseases of the Stomach and Intestines," including acute, chronic, and phlegmonous gastritis, cholera-morbus, softening and dilatation of the stomach, ulcer, cancer, and hæmorrhage of both stomach and intestines, intestinal catarrh, colic, and rupture of the intestine. This section occupies over three hundred and sixty pages. Leichtenstein contributes "Constrictions, Occlusions, and Displacements of the Intestines." Heller writes upon "Intestinal Parasites." Von Ziemssen writes the section on "Diseases of the Larynx" mentioned on the title-page. This is quite an elaborate article, occupying nearly two hundred pages. Steffen contributes the concluding paper, on "Spasm of the Glottis."

The reader will see at a glance that the book furnishes an abundance of material for the reviewer to select from, yet we have concluded to notice but a few points from Leube's article, not on account of its being more interesting or practical than the others, but because, first, our attention has lately been called particularly in that direction in every-day practice; and, second, but little need be said, except a recommendation to peruse the volume itself.

Leube makes some very excellent remarks on the anatomy and physiology of the stomach and bowels—condensed, of course, but of such a character as to enable the student to duly appreciate the practical portion which follows.

The author describes as "acute gastritis" what Flint would call subacute gastritis. He gives separate consideration to a variety of inflammations of the stomach, which he calls "gastritis phlegmonosa—interstitial purulent inflammation of the walls of the stomach," in other words, abscess of the stomach. No measures for treatment, beyond those required for accompanying peritonitis, are recommended, inasmuch as it is usually impossible to make a diagnosis during life. Dyspepsia does not receive separate consideration, it being considered in the section devoted to chronic gastritis. In the treatment of this affection (chronic catarrh), the author urges a restriction of the diet to easily-digested articles as of primary importance; and the use of muriatic acid to assist in the digestive process is recommended in certain cases. Leube is favorably disposed toward the employment of certain aperient mineral waters, for the purpose of emptying the stomach of acrid and offending substances. He is so minute in his rules for the employment of the different waters, and so cautious, that we are reminded of the sad fate of one whose epitaph is said to have been found upon a country tombstone. The epitaph reads as follows:

> "Here lies the body of Mary Ann Chowder,
> Who burst from drinking a Seidlitz-powder;
> Called from this world to her heavenly rest,
> She should have waited till it effervesced!"

It will well repay every practitioner to peruse what the author has to say on this subject; also upon the differentiation of the several chronic affections of the stomach. In dilatation of the stomach, the author's chief reliance is upon the use of the stomach-pump. He also makes use of it as a means of relief in cases of cancer of the pylorus. In cases of gastric ulcer Leube seems to be quite faithless as to the value of medicines, even of bismuth; he relies wholly upon a "meat solution" devised by Rosenthal and himself for diet, and insists upon its employment being solely and rigidly enforced. The author gives no formula for preparing this food, but the translator says in a foot-note on page 474 that "this solution is prepared by digesting meat with a strongly-acid solution of pepsin in hermetically-sealed vessels, at a temperature much higher than that of the human stomach." Two conditions are said to predominate, which enter into the etiology of ulcer—namely, first, an anæmic condition of the part (induced by various causes); and, second, an abnormal acidity of the gastric juice.

It may be stated that degeneration of the tubules of the stomach is only mentioned in connection with catarrh, it being one of the pathologic changes due to inflammation. *Ante-mortem* softening of the stomach is believed to occur in rare cases.

The several contributors to this volume and the translators have performed their work very well, having furnished an interesting and valuable book.

Art. III.—*Klinik der geburtshülflichen Operationen.* Von Dr. Heinrich Fritsch. (Clinic of Obstetric Operations.) Second edition, 8vo, pp. 390. Halle, 1876.

In the preparation of this excellent work of its kind, the author has succeeded in his object of furnishing a text-book valuable alike to both practitioner and student, with more detailed considerations of the obstetric operations than are usually offered in larger systematic works on obstetrics. In the arrangement of the material the operations are not treated systematically, divided into preparatory, bloody and bloodless, manual and instrumental, but are introduced as they may be called for in practice, in regular order. Short descriptions of the circumstances and conditions requiring aid are given, followed by directions as to the employment of the means required. Furthermore, the book is not overburdened with detailed reports of cases, these being rendered as short as possible. A brief and comprehensive account of the mechanism of labor, in the first chapter, avoids repeated and longer reference to this subject in the body of the book. Ten finely-executed plates are appended, illustrating in a very instructive manner the change of shape and traumatism sustained by the head when acted on by instruments.

The author is an energetic advocate of prophylactic disinfection in midwifery. The physician cannot preserve his fingers from all infecting material, but he can render it inert. Before every first digital examination the hand should be washed in a two or three per cent. solution of carbolic acid, or, when infectious material possibly remains on the fingers, in a five per cent. solution. This rule also applies to the midwife or nurse, and to the instruments employed. For the latter the author employs a zinc vessel sufficiently large to hold any obstetric instrument, and a solution of thirty grammes of carbolic acid in one thousand grammes of water. In case the child is decomposed, the strength of the solution is increased. The oil employed should likewise be carbolized. The above vessel may also be employed for the purpose of irrigation by rubber tubing and metallic attachment.

The author points to his success in the employment of prophylactic disinfection, the value of which was fully proved by the fact that during ten months he attended to the dressings in a case of suppurative coxitis three times daily, and during this period he had two hundred and forty operative cases, without a single death or even serious illness. He adds that puerperal fever will be banished only "when all accoucheurs and midwives shall have become believers in methodical prophylactic disinfection."

ART. IV.—*Nutrition in Health and Disease. A Contribution to Hygiene and to Clinical Medicine.* By JAMES HENRY BENNET, M. D., Member Royal College Surgeons, London; late Obstetric Physician to the Royal Free Hospital, etc. Second edition. Philadelphia: Lindsay & Blakiston, 1876.

THE first edition of this work appeared in 1858, and has long been out of print. Since that time the distinguished author has been obliged, on account of failing health, to put in practice the hygienic principles laid down by himself, and, having done so, he declares, in the preface to his second edition, that he is considered a "better man, physically," than he was twenty years ago.

The broad and important subject of nutrition in health and disease is discussed in such a very pleasant and practical manner that the volume will prove of interest to many lay as well as professional readers. The author says, for example: "I often compare the animal organization to a house built of bricks. If they are good, applied in their proper places, and cemented with sound mortar, the house is a good one, and can defy the elements—storm, rain, frost, and even time—for centuries. But if the bricks and the mortar are bad, and imperfectly put together, a house may be reared fair to look at, but unable to stand the test of the elements and of time. It crumbles to pieces; the mason is ever repairing it, but in vain. So it is with the animal organization. Each meal is a brick; if the food is good and appropriate; if, the nervous system being sound, the functions of digestion and assimilation and chylification are efficiently carried out, nutrition is accomplished throughout the economy in a perfect manner, and the animal economy is solidly built up, day by day, week by week, year by year."

One suggestive chapter is devoted to the subject of defective nutrition from over-supply of food, and another to the significance of the urinary deposits that can be observed without special apparatus. Much importance is attached to the deposit of urates which occurs in imperfect nutrition on the mere cooling of the urine.

The object of Dr. Bennet is to enforce the axiom that prevention is better than cure, and his work will well repay perusal.

ART. V.—*The Microscopist: a Manual of Microscopy and Compendium of the Microscopic Sciences, Micro-Mineralogy, Micro-Chemistry, Biology, Histology, and Practical Histology.* Third edition, rewritten and greatly enlarged. With 205 Illustrations. By J. H. WYTHE, A. M., M. D., Professor of Microscopy and Biology in the Medical College of the Pacific, San Francisco. Philadelphia: Lindsay & Blakiston, 1877.

WE are not familiar with the previous editions of this work, but the author states in the preface that it has been before the public more than a quarter of a century. The scope of the work may be judged of by the title-page. It is a very well-written and thoroughly practical introduction to the study of microscopy, and is evidently from the pen of an accomplished teacher. It does not, of course, go far in any one department, but it goes far enough to encourage the student to pursue the special branch in which he may be interested, and with this guide before him he may be sure that he will not go astray. Many of the illustrations are borrowed from other works, but due credit is given, and they are so admirably reproduced that they are in many cases better than the originals. The plan adopted of printing them in color and on heavy paper adds much to the elegance of the volume, which we cheerfully recommend to those beginning the study of the microscope.

Art. VI.—*A Practical Treatise on the Diseases of Children.* By J. Forsyth Meigs, M. D., one of the Physicians to the Pennsylvania Hospital, Consulting Physician to the Children's Hospital, etc., etc., and William Pepper, A. M., M. D., Professor of Clinical Medicine in the University of Pennsylvania, Physician to the University, Philadelphia Children's Hospital, etc., etc. Sixth edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1877.

It is only three years since we had the pleasure of recommending the fifth edition of this excellent work. Some of the minor omissions, which we then noticed, have been supplied in the sixth edition, which has evidently undergone a careful revision. Some articles, as that on "Cerebral Congestion," have been entirely rewritten, and a few new articles have been introduced, including one on "Epidemic Cerebro-Spinal Meningitis." With the recent additions it may safely be pronounced one of the best and most comprehensive works on diseases of children of which the American practitioner can avail himself for study or reference.

Books and Pamphlets Received.—On Some Undetermined Points in Typhoid Fever. By David Cullen, M. D., Surgeon-Major A. M. D., Registrar R. V. Hospital, Netley, etc. London: Henry Kimpton, 1877. Pp. 126.

A Comparative Sketch of the Early Development of the Ear and Eye in the Pig, together with a New Account of the Development of the Meatus Externus, Drum, and Eustachian Tube. By David Hunt, M. D., Boston. Reprinted from the "Transactions of the International Otological Congress," 1876.

The Mortality of Surgical Operations in the Upper Lake States compared with that of other Regions. By Edmund Andrews, A. M., M. D., Professor of Principles and Practice of Surgery in Chicago Medical College, assisted by Thomas B. Lacey, M. D., Assistant Surgeon in the National Soldiers' Home. Chicago: Hazlett & Reed, 1877. Pp. 124.

A Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. III., No. 1. Whole number, 25. Transfusion of Blood, and its Application. By Thomas G. Morton, M. D., one of the Surgeons to the Pennsylvania Hospital, etc. New York: G. P. Putnam's Sons.

Myelitis of the Anterior Horns, or Spinal Paralysis of the Adult and Child. By E. C. Seguin, M. D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York. New York: Putnam's Sons, 1877. Pp. 120.

On the Importance of the Uterine Ebb as a Factor in Pelvic Surgery. By R. H. Storer, M. D. Reprinted from the *Edinburgh Medical Journal*, January, 1877.

De l'Échange des Gaz dans la Caisse du Tympan. Considérations physiologiques et Applications thérapeutiques. Par M. le Dr. Lœwenberg. Paris: Bureau du *Progrès Médical.*

Syphilis and Chancroid. Brief History, Differential Diagnosis, Prophylaxis, and Treatment. By P. H. Bailhache, Surgeon United States Marine Hospital Service. Pp. 30.

A Case of Exostosis of the External Auditory Meatus drilled out by the "Dental Engine." By A. Mathewson, M. D., Brooklyn. Reprinted from the "Transactions of the International Otological Congress," 1876.

General Paresis. By A. D. Macdonald, M. D., Medical Superintendent of the New York City Asylum for the Insane, etc. Reprinted from the *American Journal of Insanity* for April, 1877.

On the Development of the External Ear-Passages. By David Hunt, M. D. Boston. Pp. 5.

Sixteenth Annual Report of the Board of Managers of the Woman's Hospital of Philadelphia. January, 1877.

Propositions in Regard to Animal Vaccination. By Frank P. Foster, M. D. Read before the New York Academy of Medicine.

Considerations in Relation to Diseases of the Joints. By David Prince, M. D. Reprinted from the *American Practitioner*, February, 1877.

The Eighty-seventh Annual Report of the Board of Trustees of the New York Dispensary, January, 1877.

Annual Announcement of the Medical College of the Pacific, San Francisco. Session of 1877.

Reports on the Progress of Medicine.

CONTRIBUTED BY DRS. GEORGE R. CUTTER, EDWARD FRANKEL, AND E. H. BRADFORD.

SURGERY.

Cutaneous Emphysema following the Opening of a Pulmonary Cavity.—Dr. Galli reports (*Rivista Clin. di Bologna*, No. 9, 1876) a case which is quite interesting and novel. The patient had suffered from tuberculosis for some time, and died of phthisis at the hospital in Piacenza. During the last days of her life there had been a tumefaction, with emphysematous crepitation, corresponding to a previously-diagnosticated pulmonary cavity. This emphysema became extended to the thorax, the neck, face, etc.

The autopsy showed that this condition was due to a very novel cause. There were adhesions between the two laminæ of the pleura in consequence of a preceding pleuritis. A superficial cavity had formed in the lung, corresponding to the point where these adhesions were located. The cavity had opened at the surface of the lung; the pleura had become ulcerated, and the latter process extended beyond the adhesions. The cavity had emptied itself into the intercostal space, and through the latter the air gained a passage into the subcutaneous cellular tissue.—*Lo Sperimentale*, No. 11, 1876. G. R. C.

On Death after Extensive Severe Burns.—According to Ponfick, the symptoms of venous stasis, dyspnœa, coma, which set in after extensive burns, are "the expression of the inability of the organism under existing circumstances to carry on the function of respiration in its previous extent."—In a case of scalding, in which death took place eighteen hours after, the author found extensive enteritis, swelling of Peyer's patches and solitary follicles, very intense hyperæmia of the stomach and intestines, hæmorrhagic erosions in the mucous membrane of the stomach and duodenum, hæmorrhagic patches in the cæcum and colon at the summit of the folds. From these lesions the assumption is justified that duodenal ulcers observed in cases of burns originate in hæmorrhagic infarctions, and likewise that the simple duodenal ulcer is traceable to a former general affection. In another case of scalding, in which death also occurred after eighteen hours, the author found intense nephritis, with exudation into the tubules, and numerous hyaline casts in the urine.—*Berlin. klin. Wochenschr.*, No. 17, 1876; *Med.-chir. Centralbl.*, 1876. E. F.

Salivary Calculus in Wharton's Duct.—Garniel reports the case of a young man who, in 1870, experienced a severe pain while eating, and on examining felt an induration. The physician consulted suspected an abscess and ordered leeches and liniments, after which pain and swelling disappeared. One year later these symptoms reappeared, followed by an inflammation of the submaxillary gland. These were relieved by similar antiphlogistic treatment as on the former occasion, and nothing manifested itself until the fall of 1875, when his ailment reappeared with such severity that he was obliged to seek relief in the Hôtel-Dieu. On admission, the bottom of the buccal cavity was found occupied by a swelling, filling it completely and extending rather from before backward than transversely. The mucous membrane covering it had its normal color, but was traversed by numerous new vessels. On palpation the swelling was hard, did not fluctuate, and on passing a probe into Wharton's duct a hard body was touched. The patient complained of severe pains in the lower portion of the mouth, in the lower lip, and in the four lower incisors, that in the latter being most severe. Movements of the lower lip and tongue were difficult, as also mastication and articulation; no change in the salivary secretion. Differential diagnosis between ranula and salivary calculus was easy. The stone was removed by an incision through the mucous membrane and cyst; it was larger than was anticipated before the operation, weighed 10.33 grm., was 0.05 m. long, and had a diameter of 0.06 m.—This salivary calculus is the largest and heaviest that has ever been reported as found in Wharton's duct. Its color was pale-yellow, consistence soft, and it contained a nucleus, not derived, however, from a foreign body. Chemical examination made by Hardy revealed its composition of 7.0 parts water, 0.83 parts fat, 0.64 organic substances soluble in water, 0.90 soluble mineral substances, 11.90 organic substances, 5.80 ammonio-magnesian phosphates, 55.40 phosphate of lime, 1.40 undetermined parts. Microscopic examination by Lionville showed blood-corpuscles, muscular fibres derived from the food, and degenerated epithelial cells.—*Le Progrès Méd.*, No. 12, 1875. E. F.

Circumcision.—M. Broca performed this operation in the following manner: The patient was an infant, whose preputial orifice was so contracted that micturition was performed with great difficulty. A probe was first introduced into the orifice, to make certain of no adhesions existing between the prepuce and the glans. An exploring trocar, the stylet retracted, was then passed to the bottom of the superior balano-preputial *cul-de-sac;* the tissues at this point were then perforated by the trocar. The second step of the operation consists in tightly compressing the portion of the prepuce to be removed, with an ordinary dressing-forceps applied underneath the canula. The latter is left in place, while the bistoury is passed beneath it, removing the redundant tissue. The operation is completed in the usual manner.—*Rev. de Thér. Méd. Chir.*, No. 17, 1876.

E. F.

Indications for Trephining.—M. Lucas Championnière recently read before the Société de Chirurgie at Paris a paper on the indications for trephining the cranium, based on anatomical investigations which he has been making for some time. M. Championnière performed a successful operation of trephining upon a man who suffered from a partial paralysis of the right arm for seven days subsequent to an injury. There was no scalp-wound, but on incising a fracture was discovered; the trephine was used, a splinter was elevated, and the patient recovered. The French surgeon was led from this case to believe that the locality for trephining could be indicated by the presence of a central cerebral lesion, which the patient might give evidence of. Anatomical investigations show that all the motor centres are grouped around the fissure of Rolando. Practically, when a patient gives evidence of paralysis of the motor centres, it is simply necessary to be able to locate the fissure of Rolando. To find the upper or internal end of this fissure the surgeon marks off a point fifty-five millimetres behind the bregma on the median line. The lower end of this fissure is to be found seven centimetres behind the external orbital apophysis on an horizontal plane. A line drawn between these two points indicates the situation of the fissure of Rolando. If there is loss of motion in a lower extremity, the trephine should be applied on the upper part of this line; if of the upper extremity, at the middle of this line; in aphasia or paralysis of the face, at the lower end.

The bregma can be found with sufficient accuracy, by drawing a line from one auditory meatus to the other, perpendicular to the horizontal plane (the patient is lying).

M. Championnière believes that, with the use of antiseptic dressings, the complications which have hitherto made trephining so fatal will be avoided, and the surgeon will be justified in much bolder measures than has hitherto been the custom.—*Gaz. Hebd.*, February 23, 1877.

E. H. B.

Miscellany.

The Mortality in Ovariotomy.—In the *Lancet* of March 10th, Dr. Keith, of Edinburgh, reports a case of ovariotomy, in which the patient had acute peritonitis, with a temperature of 103½° at the time of the operation. "The pelvis and its contents, uterus, and rectum, were coated with a thick lining of intensely putrid lymph." There was, in fact, gangrene of the cyst; yet the patient recovered, after a severe struggle. Dr. Keith says in comment: "I have now operated fourteen times in cases of acute suppurating or putrid cysts. Every one at the time looked hopelessly bad, yet twelve of them recovered. If in such a proportion bad cases do well, surely the mortality after ordinary operations of ovariotomy ought to be much lower than it is. Yet, speaking for myself, the mortality year by year diminishes. In the last one hundred and seven operations there have been ten deaths, while, of twenty-one performed last year, all got well save one."

At a meeting of the Royal Medical and Chirurgical Society, reported in the *Medical Times and Gazette* of March 17th, Mr. T. Spencer Wells gave the results of three hundred cases of ovariotomy, additional to the five hundred previously reported. The mortality in the sixth hundred was twenty-nine; in the seventh, twenty-four; and in the eighth, twenty-four. Mr. Wells has not thought proper, thus far, to adopt any special antiseptic precautions. He said, in the discussion that followed the above report, that he had almost decided to try the antiseptic method in one hundred cases (the ninth hundred), but he had not done so. He had now operated in twenty-seven more cases, by the usual method, without a single death. Had he obtained the same result under a new method, it would have been taken for granted that the method had some connection with the result.

Dr. Wells expressed the opinion that drainage-tubes were seldom necessary, and that the fact that a quantity of fluid escaped by them did not prove their necessity. He thought a tube might cause the secretion of fluid. "He should restrict its use to cases where the peritoneal cavity could not be completely cleansed, or where some bleeding might be feared after closure of the abdominal wall."

Appointments, Honors, etc.—Dr. James R. Wood has been appointed Consulting Surgeon to the New York City Lunatic Asylum, Blackwell's Island, and New York City Asylum for the Insane, Ward's Island. Dr. George F. Shrady has been appointed Attending Surgeon to the Presbyterian Hospital, to fill the vacancy caused by the death of Dr. Gurdon Buck. Dr. J. A. Octerlony has resigned the chair of Materia Medica in the Louisville Medical College and the Kentucky School of Medicine. Dr. Cowling, of Louisville, has been elected to the presidency of the College of Physicians and Surgeons of that city. Dr. Richard Gundry, formerly Superintendent of the Athens Hospital for Insane, Ohio, has been appointed Superintendent of the Columbus Hospital, and Dr. Charles L. Wilson succeeds him in the Athens Hospital. Dr. R. M. Buck, Superintendent of the Asylum at Hamilton, Canada, has been appointed to the same position in the London Asylum, Canada, and is succeeded in the Hamilton Institution by Dr. J. M. Wallace, late Superintendent of the Asylum for Idiots, Orillia.

Mr. Henry Smith has been appointed Professor of Systematic Surgery in King's College, vacant by the appointment of Mr. John Wood to the chair of the late Sir William Fergusson. Measures are being taken to erect a monument to Stromeyer, in Hanover, his birthplace. Sir William Thomson, of Glasgow, has been awarded, by the Italian Scientific Association, the prize instituted by Carlo Matteucci for the Italian or foreigner who, by his writings or discoveries, has contributed most to the advancement of science.

Graduates of 1877.—The following list gives the number of recent graduates in the various medical colleges, as far as we have found them reported:

Jefferson Medical College	198
University Medical College, New York	157
Bellevue Hospital Medical College	147
University of Pennsylvania	121
College of Physicians and Surgeons, New York	118
Rush Medical College, Chicago	103
University of Louisville	80
Ohio Medical College	80
University of Nashville	70
Louisville Medical College	47
Albany Medical College	38
Chicago Medical College	37
Hospital Medical College, Louisville	36
Miami Medical College	35

University of Buffalo	31
Detroit Medical College	30
College of Physicians and Surgeons, Indianapolis	23
Medical College of Indiana	22
University of California	20
Medical College of the Pacific	20
McGill University, Montreal	19
Woman's Medical College, Philadelphia	15
Woman's Medical College, Chicago	4

Journalistic Notes.—We have received the first number of the *Hospital Gazette*, a new monthly journal, edited by Dr. F. A. Lyons, and published by Rutledge & Co., of this city. It contains sixteen pages of well-chosen reading-matter, including two clinical lectures.

The Chicago Medical Press Association has taken charge of the publication of the Chicago *Journal and Examiner*, and has enlarged the staff by appointing Dr. E. F. Ingals assistant editor.

The Detroit *Review of Medicine and Pharmacy* has been consolidated with the *Peninsular Journal of Medicine*, and the *Detroit Medical Journal*, published under the auspices of the Detroit Medical and Library Association, is the result. Drs. L. Connor and J. J. Mulheron are the editors, assisted by Drs. T. F. Kerr and E. A. Chapoton.

The *Charleston Medical Journal and Review*, edited by Drs. Porcher and Parker, has been discontinued.

Peroxide of Hydrogen in Scarlet Fever.—Dr. John Day, of Geelong, Australia, recommends (*Medical Times and Gazette*, March 10, 1877) the use of peroxide of hydrogen (ozonic ether) in scarlet fever and small-pox. Dr. Day has had excellent results from the inunction of the whole body, three times a day, with an ointment containing: ozonic ether, four drachms; pure lard, four ounces; benzoic acid, twenty grains; attar of roses, four drops—to be carefully mixed without the aid of heat. Where the throat symptoms are severe, he prescribes a mixture containing two or three drachms of ozonic ether in half a pint of water. The dose is from a teaspoonful for a child twelve months old to a tablespoonful for an adult, every second hour. This treatment is said to answer admirably, and very materially to diminish the infecting power of these diseases.

The Kentucky State Medical Society.—A large and successful meeting of this Society was held in Louisville, April 3d, 4th, and 5th, Dr. R. W. Gaines, President of the association, in the chair. The following officers were elected for the ensuing year: President, Dr. L. P. Yandell, Sr., of Louisville; Senior Vice-President, Dr. J. Dismukes, of Mayfield; Junior Vice-President, Dr. W. B. Rodman, of Frankfort; Recording Secretary, Dr. J. H. Letcher, of Henderson; Corresponding Secretary, Dr. J. W. Singleton, of Paducah; Treasurer, Dr. James A. Larrabee, of Louisville; Librarian, Dr. H. F. McNairy, of Princeton; Committee of Publication, Dr. Coleman Rogers, Dr. R. O. Cowling, and Dr. J. M. Holloway, of Louisville.

Death from Ether and Nitrous Oxide.—The *Medical Times and Gazette* of March 17th records the first case of death during the administration of nitrous-oxide gas and ether. The patient was a woman fifty-five years of age, who had been admitted to the University College Hospital in consequence of strangulated femoral hernia, for the reduction of which the anæsthetics were given. Clover's apparatus was employed. At the autopsy stercoraceous matter was found in the trachea and right bronchus.

Death from Chloroform.—The *Lancet* of March 24th reports the death from chloroform, in the Derbyshire Infirmary, of a man aged fifty-six, who was about to be operated on for fistula. About three drachms of chloroform had been carefully given, when "violent muscular spasm supervened, the respiration became embarrassed, and death resulted in spite of every effort at resuscitation." No mention is made of a *post mortem.*

Lectures on Nervous Diseases.—A course of six lectures on the nature and treatment of epilepsy, paralysis, and contractions, illustrated by experiments, was delivered during the past month, by Dr. Eugene Dupuy, in the College of Physicians and Surgeons of this city. The course was attended by a highly-appreciative audience.

Forthcoming Books.—Messrs. Putnam's Sons announce a work by Dr. Hammond, on the influence of the maternal mind over the offspring during pregnancy and lactation. Also a work by Dr. Mary Putnam-Jacobi, on the question of "Rest for Women" during the period of menstruation, illustrated with a large number of sphygmographic tracings.

Medical Society of the County of Kings.—The following are the officers of this Society for the present year: President, Alexander Hutchins, M. D.; Vice-President, C. Jewett, M. D.; Secretary, R. M. Wyckoff, M. D.; Assistant Secretary, N. B. Sizer, M. D.; Treasurer, G. G. Hopkins, M. D.; Librarian, W. W. Reese, M. D.

Scarcity of Dissecting Material abroad.— A distressing scarcity of subjects has existed for some years in London, and now it appears almost as difficult to obtain material in Paris. In consequence, the students of the École de Médecine have of late been allowed to dissect only half the usual time.

Association of American Superintendents of Insane Asylums.—The thirty-first annual meeting will be held at the Lindell Hotel, St. Louis, on Tuesday, May 29, 1877. By a standing resolution the trustees of the several institutions are invited to attend the meetings of the Association.

The University of London on Women.—By a vote of fourteen to eight the University of London has decided to admit women to medical degrees. No restrictions whatever will be placed on their sphere of labor, so that they appear to stand on the same footing as male graduates.

The Pennsylvania State Medical Society.— The twenty-eighth annual session of this Society will be held at Harrisburg, on Wednesday, June 13, 1877, at 3 P. M.

American Medical Association.—The twenty-eighth annual session will be held in the city of Chicago, Ill., on Tuesday, June 5, 1877, in Farwell Hall, at 11 A. M.

"The delegates shall receive their appointment from permanently-organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy of the United States.

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, Territory, county, city, or town, shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of medical societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates. Will you kindly send to the undersigned a list of your members, with their residences, in order that a correct record may be made of all who are in affiliation with this body?

Sections.—"The chairmen of the several sections shall prepare and read in the general sessions of the Association papers on the advances and discoveries of the past year in the branches of science included in their respective sections. . . ."—BY-LAWS, Article II., section 4.

Practice of Medicine, Materia Medica, and Physiology: Dr. P. G. Robinson, St. Louis, Mo., Chairman; Dr. B. A. Vaughan, Columbus, Miss., Secretary.

Committee appointed to report to this section:

On Clinical Observations: Dr. N. S. Davis, Ill., Chairman; Dr. H. A. Johnson, Ill.; Dr. J. B. Johnson, Mo.

Obstetrics and Diseases of Women and Children: Dr. James P. White, Buffalo, N. Y., Chairman; Dr. Robert Battey, Atlanta, Ga., Secretary.

Surgery and Anatomy: Dr. ———, Chairman; Dr. Moses Gunn, Chicago, Ill., Secretary.

Medical Jurisprudence, Chemistry, and Psychology: Dr. Eugene Grissom, Raleigh, N. C., Chairman; Dr. E. A. Hildreth, Wheeling, W. Va., Secretary.

State Medicine and Public Hygiene: Dr. Ezra M. Hunt, Metuchen, N. J., Chairman; Dr. D. R. Wallace, Waco, Texas, Secretary.

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent to examine them with care, and, with the advice of the chairman of his section, to determine the time and order of their presentation, and give due notice of the same. . . ."—BY-LAWS, Article II., section 5.

The following committees are expected to report:

On Influence of Climate on Pulmonary Diseases in Florida: Dr. E. T. Sabal, Fla., Chairman.

On Animal Vaccination: Dr. Henry A. Martin, Mass., Chairman.

On the Inheritance of Syphilis: Dr. J. W. Thompson, Ky., Chairman.

On Prize Essays: Dr. N. S. Davis, Ill., Chairman.

On Necrology: Dr. S. C. Chew, Md., Chairman.

On Catalogue of National Library: Dr. H. C. Wood, Pa., Chairman.

WM. B. ATKINSON, M. D., *Permanent Secretary*,
1400 Pine Street, Philadelphia, Pa.

The Late Dr. Gurdon Buck.—At a stated meeting of the New York Academy of Medicine, held April 5, 1877, a committee, consisting of Drs. W. T. White and J. R. Leaming, presented the following resolutions, which were unanimously adopted:

Whereas, It has pleased an All-wise Providence to remove by death our late associate, Gurdon Buck, M. D., an original Fellow of this Academy: therefore be it

Resolved, That the medical profession of this country, and especially the New York Academy of Medicine, mourn the loss of an eminent member and an upright citizen.

He was singularly devoted to the advancement of his profession. He was assiduous in the performance of self-imposed duties of charity at the hospitals and at the dispensaries of this city.

He was ever ready with counsel and support at the medical societies. His surgical achievements belong to the history of his native land. They were original, practical, and brilliant.

In the galaxy of talent which shone in the old New York Hospital he stood among the foremost. His patriotism and high Christian character are our worthy example.

Resolved, That we tender the family of Dr. Buck our sincere sympathy.

Resolved, That a copy of these resolutions be sent to them, and that they be published in the medical journals of this city.

S. S. Purple, M. D., *President.*
H. T. Hanks, M. D., *Recording Secretary.*

At the regular meeting of the Medical Board of the Presbyterian Hospital, held April 11th, the following resolutions were adopted:

Whereas, It has pleased Almighty God to remove from earth the soul of our late associate, Gurdon Buck, M. D.:

Resolved, That we highly appreciate the untiring industry, the unflagging zeal, the patient study, the careful observation and accurate record of cases, the sound judgment, the fertility of resources, and the skillful application of the means of relief, which raised him to a very distinguished position as a surgeon, and gave him a world-wide reputation in the profession.

Resolved, That we entertain a high sense of his executive ability, displayed in the organization of the surgical department of this hospital and of other institutions with which he was connected.

Resolved, That we cherish his memory as that of an upright and honorable man, a good citizen, a faithful friend, and a consistent Christian.

Resolved, That we sympathize with the members of his family in the bereavement which they have sustained.

Resolved, That copies of these resolutions be sent to the family of the deceased and to the medical journals of this city.

Out-door Department of the New York Hospital.—The following gentlemen constitute the attending staff: Surgery, Drs. S. F. Morris and G. F. Blauvelt; Heart and Lung Diseases, Drs. Beverley Robinson and G. G. Wheelock; Diseases of the Head and Abdomen, Drs. T. A. McBride and A. McL. Hamilton. From 3 to 4 p. m.: Skin and Venereal Diseases, Drs. L. D. Bulkley and R. Abbe; Children, Drs. F. P. Kinnicut and H. F. Heineman; Women, Drs. G. S. Winston and F. P. Foster.

Compliment to American Surgery.—Prof. Langenbeck, of Berlin, in speaking of Dr. James R. Wood's cases of sub-periosteal resection, says that they are unequaled in surgical history. By special request the original specimens have been sent to the professor, to be presented by him at the meeting of the Medical Congress, of which he is President.—*Medical Record.*

Army Intelligence.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 14 *to April* 13, 1877.

Randolph, John F., Surgeon.—Assigned to duty at Fort Trumbull, Conn. S. O. 61, Division of the Atlantic, March 17, 1877.

De Graw, C. S., Assistant Surgeon.—To report to the commanding officer Department of the South, for assignment to duty. S. O. 63, A. G. O., March 24, 1877.

Jessop, S. S., Assistant Surgeon.—Assigned to duty at Edgefield, S. C. S. O. 64, Department of the South, April 5, 1877.

Azpell, Thomas F., Assistant Surgeon.—Relieved from duty at Fort Columbus, N. Y. H. S. O. 69, A. G. O., April 2, 1877.

Moffatt, P., Assistant Surgeon.—Assigned to duty at Fort Foote, Md. S. O. 74, Division of the Atlantic, April 3, 1877.

Ewen, C., Assistant Surgeon.—Assigned to duty at Madison Barracks (Sackett's Harbor), N. Y. S. O. 70, Division of the Atlantic, March 28, 1877.

Havard, V., Assistant Surgeon.—When relieved by Assistant-Surgeon Perley to report in person to the commanding officer Fort A. Lincoln, D. T., for field-service. S. O. 42, Department of Dakota, April 4, 1877.

Skinner, J. O., Assistant Surgeon.—Assigned to duty at Fort Johnston, N. C. S. O. 49, Department of the South, March 13, 1877.

Turrill, H. S., Assistant Surgeon.—Granted leave of absence for one month, with permission to leave limits of the department, and apply for an extension of three months. S. O. 60, Department of Texas, March 30, 1877.

Wood, M. W., Assistant Surgeon.—Assigned to duty at Cantonment Reno, Wy. T. S. O. 34, Department of the Platte, March 13, 1877.

Gardner, Edwin F., Assistant Surgeon.—Assigned to duty at Camp Hancock, D. T. S. O. 31, Department of Dakota, March 15, 1877.

Andrews, W. C. C., Assistant Surgeon.—Assigned to duty at Fort Stevens, Oregon. S. O. 22, Department of the Columbia, March 7, 1877.

Perley, H. O., Assistant Surgeon.—Assigned to duty at Fort Pembina, D. T. S. O. 42, C. S., Department of Dakota.

Hasson, A. B., Surgeon.—Died March 19, 1877, at Fort Trumbull, Conn.

Obituary.

Dr. Valdemar Rasmussen, of Copenhagen, one of the editors of the *Hospitals-Tidende*, and physician to the Kommune Hospital of Copenhagen, died February 22d, aged forty-two years. He was the author of some valuable papers on diseases of the lungs.

Dr. Hermann Althof.—Dr. Althof was born on the 8th of August, in the year 1835, at Horn, in Lippe-Detmold, Germany, and was the youngest son of a school-teacher in that town.

In 1847 he accompanied his father on a visit to his elder brother, who had settled in New York City. After his return he began the study of medicine, first in Würzburg, later in Zürich, Vienna, Prague, and Berlin, where he received his diploma in the year 1857. Here Prof. A. von Graefe began to interest himself in the progress of his gifted pupil, with whom he tried to form a closer alliance by offering him a position as one of his assistants. H. Althof, however, left Berlin to continue his studies in Paris, where he enjoyed exceptional advantages for the study of ophthalmology under Desmarres, in consequence of Graefe's recommendations. He returned to New York, and commenced the practice of medicine, and more especially that of diseases of the eye, in 1858. Two years later he left the city again for Europe, spending part of a year in Würzburg, with Prof. Müller, devoting himself to the study of pathological and microscopical anatomy, and part in Berlin with Graefe. After his return he devoted a large portion of his time to those public institutions to which he had become attached, the German Hospital and Dispensary, as well as the New York Eye and Ear Infirmary. In the former he was a member of the Board of Managers; in the latter he filled the place of Executive Surgeon for about eighteen months before his death. He was one of the founders of the Ophthalmological Society of New York, as well as of the American Ophthalmological Society.

His contributions to our literature, although not numerous, are all of importance. He published in *Graefe's Archiv*, Bd. viii., Abthl. 1, *Klinische Notizen* on—

1. "Intraoculäre Blutungen."
2. "Auflagerungen auf die Lamina elastica anterior."
3. "Cancroid der Conjunctiva bulbi."

Further, a paper on "Canthoplasty: a Clinical Study." In the "Transactions of the American Ophthalmological Society," vol. ii., part 2. Besides these, the "Transactions" of the above-named societies contain a number of valuable communications relating to diseases of the eye, being part of the discussions on papers read at the several meetings. Among these must be mentioned a report of "Eight Cases of Subretinal Effusion," in all of which a spontaneous cure was observed.

Dr. Althof was esteemed and admired by his colleagues for his extensive and well-digested information; for his extraordinary powers of diagnosis, wonderful manual dexterity, and sound judgment; for his great, unselfish devotion to the duties of his profession; for the modesty of his bearing, and as one of the few who, by his whole life, demonstrated practically the disgust he felt for quackery in all its various shapes, and the detestation in which he held even wavering honesty in matters connected with the ethics of our profession. Dr. Althof's personal qualities were of an extraordinary nature. His vast knowledge of literature and art, the rare beauty of his character as a man, his great amiability and want of selfishness, made him the centre of a large circle of devoted friends, not only among his colleagues and his patients, but in all classes of society. He was connected by the ties of friendship with many of the prominent men in Europe as well as in this country. He was a patriot who, without taking part in the working of political affairs, loved his adopted country, and zealously supported and defended its interests whenever he had occasion to do so.

"His whole life furnishes a rare example for all to follow, and as the best tribute we can pay to his worth, we can but attempt to uphold by our own endeavors the lofty standard of excellence he himself professed." E. N.

Dr. Henry Lander, M. R. C. S. Eng., Superintendent of the London (Ontario) Asylum for the Insane, died January 6th, aged sixty-one years.

Dr. Dolbeau, Professor of Surgical Pathology of the Faculty of Paris, died March 10th, of cerebral hæmorrhage, aged forty-six years.

William Wood, the senior member and founder of the firm of William Wood & Company, medical publishers, died April 9th, aged eighty years.

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Original Communications.

ART. I.—*On the Treatment of Intussusception by Abdominal Section, with the Report of a Case in which the Operation proved successful.* By H. B. SANDS, M. D., Professor of Anatomy in the College of Physicians and Surgeons, Attending Surgeon to the Roosevelt and New York Hospitals, etc.

AT 6 P. M. on Sunday, March 11, 1877, I was called to see Mary L., an infant six months old, who, while nursing twelve hours previously, had been suddenly attacked with tenesmus and abdominal pain. Soon afterward vomiting set in, and continued during the day whenever the child was nursed or fed. Meanwhile, the straining action became more violent, and was attended with an escape of bloody mucus from the rectum. No feculent matter was contained in these evacuations, eight of which had occurred since they were first discovered at one o'clock. During the afternoon all the symptoms became aggravated, and the child seemed exceedingly ill. On my arrival I found the patient in great pain, and in a condition approaching collapse. The pulse was extremely weak and rapid, muscular debility marked, and tenesmus severe and frequent. From the history of the case, I at once suspected that the symptoms were due to intussusception, the presence of which I was able to confirm by manual examination. On flexing the thighs and relaxing the abdominal muscles, an elongated tumor could be felt, extending in a straight line from the left iliac region to the left hypochondrium. The upper part of this tumor was movable, and could be pushed a little beyond the median line. It was tolerably firm and inelastic, tender on pressure, and dull on percussion. The abdomen was not tympanitic, and the detection of the tumor was quite easy. On inserting the finger into the rectum, the invaginated intestine was at once discovered, reaching down nearly to the anus, and forming a mass that filled the rectum completely. The lower orifice of the intussuscepted gut could be distinguished as a depression, situated somewhat laterally; and the finger, as high as it could reach, passed freely between the mucous membrane of the rectum and the invagination. Furthermore, by conjoined manipulation, with the finger of one hand in the rectum and with the other hand upon the abdomen, the continuity of the rectal and the abdominal tumor could be distinctly appreciated.

Having satisfied my mind regarding the diagnosis, I lost no time in endeavoring to replace the invaginated intestine, and succeeded, as I thought, in effecting partial reduction by simply pushing the rectal tumor upward with the finger. But the abdominal swelling was not materially altered by this manœuvre, and the intussusception soon reappeared in the rectum. I then tried to inflate the intestine; but, as the apparatus employed for this purpose was imperfect, and adequate assistance was wanting, I soon abandoned this method, and resorted to the injection of warm water. By compressing the nates, I succeeded in throwing up a considerable quantity of fluid, which caused the rectal tumor to disappear, and the abdominal one to become smaller. As these several manipulations had occasioned much pain, and as the child seemed quite feeble, I desisted from further attempt at reduction until ten o'clock in the evening, when, accompanied by Dr. J. G. Curtis, I returned to the patient, whom I found in the same condition as at the time of my first visit. The rectal tumor had again descended close to the anus, the abdominal swelling was plainly distinguishable, and the signs of obstruction were marked. In the interval between the first and second visits, the muco-sanguinolent evacuations had continued, and the child had grown weaker. With Dr. Curtis's assistance, I inserted a flexible tube about six inches up the rectum, and practised inflation with the mouth. By this means I effected partial disinvagination; but, as the procedure occasioned great pain, and afforded only imperfect relief, I repeated it but two or three times before resorting to warm-water enemata. This time the water was injected through the long, flexible tube, inserted as above mentioned, and the distention thereby produced was evidently considerable, as was shown by the child's suffering, and by the force with which the fluid was expelled when the pressure was taken off the nates, and the tube withdrawn from the rectum. While the enemata were being administered, the child was held at times in the inverted position, and the abdomen was gently kneaded. Having pursued the treatment thus described as long as was deemed prudent, I noted the following result. The abdominal tumor had so far disappeared that it could no longer be discovered by palpation, nor could the invaginated gut now be found in the rectum. Nevertheless, by conjoined manipulation, I felt assured that a certain portion of intestine was yet unreduced, for I could distinctly make out the presence of a small but firm and movable swelling at the level of the umbilicus. Convinced that the case ought neither to be left to Nature, nor treated by medicine, and having obtained the consent of the parents to act according to my own judgment, I proceeded, without delay, to perform the operation of abdominal section, or laparotomy. Ether having been administered by Dr. Curtis, I opened the abdomen by an incision about two inches in length, extending downward from a point just below the umbilicus. By introducing two fingers through the wound, I was able to make the necessary exploration, and at the same time to prevent the escape of the small intestine. After a little delay, a tumor was discovered in the right iliac fossa, which afterward proved to be the intussuscepted mass. Finding it impossible to examine this satisfactorily without withdrawing it from the abdomen, I did so, after having necessarily permitted the escape of a large proportion of the small intestine. It was then apparent that the intussusception was of that variety which Brinton has called ileo-cæcal, and that the invagination had been greatly reduced in size by the methods of inflation and injection. What remained, and constituted the mass exposed by dissection, was an intussusception of the cæcum and terminal portion of the ileum into the commencement of the ascending colon. The mass was about an inch and a half in length, and the inversion and swelling of the cæcum appeared to have produced complete obstruction of the ileo-cæcal valve. Although the intussuscepted part was short, I found considerable difficulty in extricating it, on account of the rigidity and swelling of the intestinal coats, which were dark colored and ecchymotic. Disinvagination was effected mainly by pulling the outer or ensheathing layer of the intestine downward, and by squeezing the lower end of the intussuscepted gut. Some force had to be employed at this stage of the operation, and it was feared that the intestine might be ruptured in the attempt to reduce it; but, with caution and perseverance, the parts were gradually unfolded, until finally the vermiform appendix was extruded, and the normal relations were fully reëstablished. The ileo-cæcal valve, as felt through the intestinal walls, appeared somewhat thickened, and at first was thought to be the seat of a polypoid growth; but this impression was probably erroneous. There were no adhesions or signs of general peritonitis, and the thickening and ecchymosis of the intestinal walls were limited to the intussuscepted parts. The mass of large and small intestine that now lay outside the abdomen was gradually returned, and the wound closed with five silver sutures, embracing the peritonæum. Additional support was afforded by the use of adhesive plaster and a flannel bandage. The replacement of the small intestine was a difficult step in the operation, but was accomplished without resorting to undue violence.

The subsequent progress of the case was highly satisfactory. Pain, vomiting, tenesmus, and the discharge of bloody mucus, ceased immediately after the operation, and did not recur. During the first twenty-four hours there was slight nausea, probably due to ether. The bowels moved naturally on the second day. The shock following the operation was not severe, but the infant was too weak to nurse before the fourth day. Meanwhile, it fed regularly, and took occasionally a drop of laudanum, or a little brandy-and-water. Beyond this, no medicine was given. On the fifth day two of the silver sutures were removed; but, as the wound was not firmly united, the rest were allowed to remain, and were not all removed until the fourteenth day. At the first dressing the child struggled violently, and some gaping took place of the central portion of the wound. This occurrence, it was feared, would prove unfortunate, but no harm resulted, and recovery took place without the slightest symptoms of peritonitis. At the present date the child is in excellent health, and the cicatrix is quite firm.

Perhaps there is no situation more trying to the surgeon than that in which he finds himself placed when called upon to decide the question of performing the operation of abdominal section for the relief of intestinal obstruction. Confronted by the uncertainties of diagnosis on the one hand, and by the perils of the operation on the other, he may well be pardoned if he should err on the side of timidity, and hesitate to resort to the knife without further light and hope to guide him. It is not strange, therefore, that the operation has been but seldom attempted, and that the general verdict of the profession has been opposed to its performance.

But in recent times a change of opinion appears to have taken place; and, encouraged by the favorable results of ovariotomy, surgeons have been led to regard abdominal section as a safer operation than it was formerly considered, and as a preferable alternative, in many cases of intestinal obstruction, to the abandonment of the disease to its natural and generally fatal course. In England, a few years ago, Mr. Jonathan Hutchinson[1] reported the first successful case in that country of the treatment of intussusception by abdominal section, and in an able paper discussed the merits of the operation. The interest thereby awakened has caused Mr. Hutchinson's example to be followed by several other English surgeons, and facts are gradually accumulating which will enable

[1] "Medico-Chirurgical Transactions," vol. lvii., 1874.

us to decide many important points that can be settled only by experience. In recording the case I have narrated—which differs in some respects from all those hitherto reported—it may not be inappropriate to consider the treatment of intussusception, and to determine the relative value of operative procedures in the light of our present knowledge. The materials, it is true, are yet scanty, but they are sufficient to settle some points that have excited considerable controversy, and to indicate the direction in which future inquiries should be made.

As important preliminaries to the question of treatment, certain facts should be borne in mind respecting the pathology of intussusception. These have been well presented in a statistical paper by Leichtenstern,[1] of Tübingen, who has collected no less than five hundred and ninety-three cases of this disease. Disregarding those invaginations so often met with at the autopsies of infants, which are believed to occur during the last moments of life, and to be unattended with symptoms, and taking into account only those intussusceptions which are accompanied with more or less of intestinal obstruction, or with inflammation, we find the disease, although not confined to any age, to be most frequent during the first years of life. Brinton, Rogers, and others, have described the anatomy of intussusception, and the following varieties of the affection have been recognized according to situation :

1. Invagination of the small intestine.

2. Invagination of the small into the large intestine through the ileo-cæcal valve. This variety has been named *ileo-colic.*

3. *Ileo-cæcal* invagination. In this the cæcum is inverted, and passes into the colon, carrying with it the ileum, which forms the innermost of the three layers. The relation of the ileum to the cæcum is unaltered, and the ileo-cæcal valve forms the presenting part, or lowest point of the intussusception.

4. *Colic* invagination. Here colon passes into colon, the

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[1] "Vierteljahrschrift für die praktische Heilkunde, 1873," Bd. cxviii., 120, 121.

ascending into the transverse, the transverse into the descending, the latter into the sigmoid flexure, or the sigmoid flexure into the rectum.

Invagination of the small intestine may occur at any point, but is found, in the great majority of cases, in the lower part of the ileum. Less frequent, on the whole, than ileo-cæcal invagination, it is exceedingly rare in infants, while in adults it occurs rather more often than the ileo-cæcal variety. Ileo-colic intussusceptions are exceedingly rare, and constitute, according to Leichtenstern, only eight per cent. of the entire number. The invaginated ileum is seldom of great length, and this form of intussusception sometimes coexists with the ileo-cæcal. The latter variety predominates in frequency over all the rest, and in children under a year old is twelve times as frequent as intussusception of the small intestine, and between two and three times as frequent as all the other forms combined. The relative frequency of ileo-cæcal invagination continues up to the tenth year of age. Lastly, colic intussusception stands next below that of the small intestine in regard to frequency, and is most often seen in childhood.

One of the most forcible objections that have been urged against abdominal section is the difficulty of ascertaining the precise cause of obstruction. Now, it will be found, I think, that the symptoms of intussusception, when carefully studied, are often so definite as clearly to indicate the nature of the morbid process, whereas in most other forms of intestinal obstruction, an exact diagnosis is often impossible, and consequently an operation is generally performed only as a last resort, and when delay has almost annihilated the chances of success. The symptoms that denote intussusception are vomiting, pain in the abdomen, constipation, tenesmus, and the discharge from the bowel of bloody mucus. Added to these is the presence of a tumor, felt through the abdominal walls, and often, when the disease involves the large intestines, likewise in the rectum. In rare instances the invaginated gut protrudes through the anus, and, if the intussusception be ileo-cæcal, the valve guarding the orifice of the ileum may perhaps be distinctly recognized. In establishing a diagnosis, the relative value of the symptoms will be found to be very different. Vomiting, abdominal pain, and constipation, are met with in most, if not all forms of acute intestinal obstruction; and although in conjunction with other symptoms, they afford important corroborative evidence of intussusception, they cannot, either singly or collectively, be regarded as pathognomonic. Tenesmus, when accompanied with the evacuation of bloody mucus, may indicate dysentery, but when the signs of obstruction coexist, intussusception must be suspected. In acute cases the discharges may be distinguished from those of dysentery by the entire absence of fecal matter. They are met with both in children and adults, but are more common in the former. Tenesmus is generally associated with the cæcal or colic intussusception, and often depends upon the presence in the rectum of the invaginated intestine. But unquestionably the most unmistakable signs of intussusception are those which depend upon the existence of a tumor formed by the intussuscepted mass. The detection of such a tumor will be more or less difficult according to the length and situation of the intussusception, the age and obesity of the patient, and the amount of tympanitic distention of the abdomen. In the early stages of the affection tympanitis is rare, especially in children, the intestinal canal being well emptied by both vomiting and purging. Later, the existence of peritonitis may be attended with so much distention as to render an examination by palpation of little value. A short intussusception, especially of the small intestine, may escape detection, while a long one, which is usually also thicker, may be readily recognized. Other things being equal, an invagination of the large, will form a more prominent tumor than one of the small intestine. In infants, the method of conjoined manipulation already described greatly facilitates the examination of the abdominal contents, and will occasionally reveal the presence of a tissue that would otherwise escape detection. In ileo-cæcal intussusception—the most common variety—the tumor may be felt either in the region of the cæcum, or along the course of one or more segments of the colon, depending on the extent of the invagination. The tumor, however, has rarely been discovered in the region of the cæcum, partly because in the beginning it is of small size, and may be wanting in firmness, and also because—the progress of the disease in such cases being usually rapid—the intussuscepted intestine speedily leaves the iliac fossa, and travels along the colon. In infants, this extension of the disease is rendered easy by the great mobility of the cæcum and the length of the meso-cæcum and meso-colon, which latter has by some writers been erroneously described as abnormal, and by many regarded as constituting a predisposition to intussusception. The detection of the intussuscepted colon will be difficult if it occupies the situation of either of the colic flexures, particularly the right one, where it will be overlaid by the liver. Most often it is found along the course of the descending colon, where it forms an elongated swelling somewhat movable from side to side, and frequently becoming harder and more prominent during a paroxysm of pain. This latter characteristic may serve to distinguish such a tumor from one caused by fecal accumulation, and deserves attention, as mistakes have sometimes been committed in regard to these two affections.

Another weighty objection in many cases to abdominal section for intussusception is the fact that the disease may terminate in spontaneous recovery. This may happen either with or without sloughing and expulsion of the intussuscepted part. A case of spontaneous reduction has been recorded by Wilks,[1] in which the symptoms had lasted for eight weeks. Other similar instances might be cited of chronic invagination, in which the constriction was not supposed to be tight. But, although cases of recovery by spontaneous reduction in acute intussusception have been reported,[2] their number, even if accepted as authentic, is too small to affect the general result, or to justify an expectant mode of treatment.

In regard to recovery after sloughing of the intussuscepted intestine, it may at first be remarked that in infants such an event is almost unknown, and in older children is far less frequent than in adults. This appears to be due to two causes. Ileo-cæcal intussusceptions, which predominate in children, are much more rarely cast off than those of the ileum, which are found mainly in adults. Moreover, young subjects, in consequence of their feeble powers of resistance, generally succumb to the disease at an early period, before the time has arrived for the separation of the slough. Neither can it be denied that the shedding of the invaginated part is rare even in adults, or that subsequent recovery occurs only in a small majority of those in whom the separation is completed. And even when the patient survives, entire restoration of health seldom happens, the patient being liable to manifold derangements of the digestive functions, or to other serious general or local disorders dependent upon the organic changes which have taken place in the alimentary canal. Thus colic, diarrhœa, constipation, and stricture of the bowel, have been frequently observed; while marasmus, dropsy, abscess, and septicæmia, are among the graver evils that have been known to follow, more or less remotely, the shedding of the intussuscepted part. Nevertheless, as recovery by this process is more frequent than by any other, it must not be undervalued, but the chances of such an occurrence fairly estimated in any given case.

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[1] London *Lancet*, 1870, vol. i., p. 731.

[2] Leichtenstern, *op. cit.*, Bd. xii., p. 40.

By many writers the terms acute and chronic have been employed to distinguish two varieties, if not stages, of intussusception. In the chronic form there exists simple invagination of the gut, the parts being free from inflammation, and the functions of the alimentary canal more or less regularly performed. This condition is closely analogous to that of reducible hernia, and may continue for many weeks or months without causing very serious mischief. But it is liable, at any moment, to pass into the acute form, which, however, often arises independently of the other. This resembles strangulated hernia, and is characterized by swelling, infiltration, extravasation, and inflammation of the intussuscepted part, tending to mortification, and due chiefly to pressure on the mesenteric vessels. In well-marked acute cases the course of the disease is rapid and severe, terminating, if left to Nature, either in the death of the patient or in the shedding of the intussuscepted part. This may be cast off as early as the third day, but the separation usually occurs between the tenth and the twenty-first day of the disease. In chronic cases, as was pointed out by Mr. Hutchinson, there is rarely any considerable alteration in the structure of the affected parts; and, adhesions being generally absent, the invaginated intestine can be drawn out without much force. In acute cases, on the other hand, the tissues soon become damaged, the morbid changes taking place more or less quickly according to the degree of strangulation present. At first, the invaginated parts become congested and œdematous, and during this stage hæmorrhage into the bowel is a frequent symptom. Later, softening, adhesions, sloughing, and ulceration mark the progress of the disease. General peritonitis, however, is a rare event, unless the intestine is perforated, and fecal matters escape into the serous sac.

Before endeavoring to estimate the value of abdominal section in cases of intussusception, it is of course desirable to inquire whether milder and safer means do not afford a reasonable chance of success. A great number of remedies have been vaunted in the treatment of this affection. Opium, belladonna, calomel, drastic cathartics, and metallic mercury, have been administered internally, while leeches, fomentations, and ice-bags have been applied to the abdomen. Some of these so-called remedies must be positively injurious, while none of them should, in my judgment, be employed in a case at all urgent. It is possible that when the symptoms are mild, and the danger of strangulation remote, the administration of opium or belladonna might be beneficial by diminishing the spasmodic action of the muscular coat of the bowel, and by thus favoring the reduction of the invagination by mechanical means; but in an acute case I should lay down the maxim which ought, as I think, to govern us in the management of strangulated hernia, namely, to lose no valuable time before effecting reduction by mechanical means. These means include—abdominal section excepted—kneading the abdomen, the introduction of a sound through the rectum, and the distention of the large intestine with either air or water. Kneading the abdomen may perhaps be occasionally valuable as an auxiliary measure, but is too uncertain to be depended on alone. The introduction of a sound or a probang into the rectum has been known to afford relief in a few instances of colic intussusception. But it is a dangerous expedient, which is only applicable when the invagination is confined to the lower division of the intestine, and even in such a case it might be preferably replaced by either insufflation or injection. These last-named methods are undoubtedly the best in vogue, and deserve a trial in every case in which the invagination is believed to be reducible, and to be situated in the large intestine. I cannot spare time to describe them, but may be allowed to make a few remarks concerning their employment. As already intimated, they are of value only when the intussusception involves the large intestine, as there is no reason to believe that either water or air can, in the living subject, be made to enter the small intestine from the colon. It is desirable, when injecting either air or water, to avoid undue violence, lest the intestine give way under the pressure to which it is subjected. Such an event would of course prove fatal, and cases in which either complete or partial rupture has occurred during inflation or injection, are recorded by Marsh, in the fifty-ninth volume of the "Medico-Chirurgical Transactions." In suitable cases these methods are attended with the happiest results, the invaginated intestine yielding to the compressing force, the abdominal tumor disappearing, and the normal functions of the alimentary canal being promptly restored. How much force should be employed must be left to the judgment of the surgeon; and the same rules ought to guide him as those which apply to the use of the taxis in cases of strangulated hernia. If injection or insufflation causes severe pain, it should be considered as dangerous. In the case I have narrated, the disinvagination of the greater part of the intussuscepted intestine was accomplished by inflation and injection without much difficulty; but I desisted from further attempts of the kind because the child suffered severe pain, and because I felt that greater force than I employed might be hazardous. And the state of the intussuscepted parts, as revealed when the abdomen was laid open, proved that my fears had been well grounded. The intestinal coats were so œdematous and infiltrated, and the invaginated gut was so firmly fixed in its abnormal position, as to render its reduction quite difficult, even when I had the advantage of direct manipulation. I have no doubt whatever that, if I had persevered in the attempt to effect disinvagination by forcible injection, I should have caused a rupture of the intestines, with its fatal consequences.

Enough has now been said to enable us to discuss the question whether the operation of abdominal section ought ever to be undertaken; and, if so, in what cases it might be performed with the greatest chances of success. We may assume that the following facts are well established. Intussusception is a disease which, if left to its natural course, terminates fatally in a large majority of cases. In infants the mortality is especially high, being, so far as statistics inform us, not less than eighty-six per cent.[1] of the entire number, whether subjected to treatment or not. In a small minority of cases the patients recover after sloughing of the intussuscepted part, although recovery is rarely permanent and complete. Medicine has little or no effect upon the disease. Replacement by the introduction of a sound, by inflation, or by injection, can be effected in a certain number of cases in which the obstruction is seated in the large intestine, but in a considerable number it will be found impracticable. Bearing these facts in mind, the question of employing the knife as a last resort naturally demands attention; but, until recently, the opening of the abdomen for the relief of intussusception has been generally condemned as a doubtful and desperate expedient.

Even at the present day, notwithstanding the success which has attended the operation in British practice, it is emphatically denounced by many authorities both at home and abroad. In a discussion on the treatment of intussusception which lately took place at a meeting of the Suffolk District Medical Society, in Boston, Dr. J. B. S. Jackson, the eminent Professor of Pathological Anatomy in the Harvard Medical School, remarked that "he considered opening the abdominal cavity for intussusception with a view to withdrawing the invaginated intestine a foolhardy procedure, since it would usually tear before it could be withdrawn, even in comparatively recent cases."[1] Mr. T. Holmes, in his "Treatise on Surgery," published in 1875, while admitting the expediency of operation in certain chronic cases, says that "in the acute, I have no doubt that the patient has a better chance from the natural cure."[2] Mr. Thomas Bryant, writing in 1876, makes the following statement in regard to early operation: "In the very early stage it might do good before the invaginated bowel has become adherent, and Gay tells us that this does not take place for four or five days after the first symptoms, and may not for ten. But in the early period the diagnosis is too uncertain to allow of such a proceeding, and the chances of a natural cure have not passed away."[3]

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[1] Leichtenstern, *op. cit.*, Bd. cxxi., p. 17.

Such statements as these, which might easily be multiplied, show that the operation has not yet obtained the general approval of the profession; and although the success recorded by Mr. Hutchinson and others has proved the value of surgical interference in chronic cases, its value in the acute form of intussusception remains to be established. As tending toward the settlement of this latter point, therefore, the case I have related may not be unimportant. And in considering the applicability of abdominal section to the various forms of intussusception, I am disposed to maintain that, unless future experience shall prove that the danger of the operation itself is unwarrantable, it would seem to be indicated, provided other expedients had failed:

1. In cases of chronic intussusception, in which there is reason to believe that the condition is one of simple invagination, unaccompanied by adhesion or other structural changes that would prevent reduction. In such cases, as Mr. Hutchinson has justly observed, the tendency to spontaneous cure by gangrene is very slight, while in the absence of inflammation the operation may be undertaken with the least possible risk. Should it be neglected, the patient will probably die either from pain and exhaustion, or in consequence of the supervention of the acute or inflammatory stage.

2. In acute cases, whether primary or secondary, if seen

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[1] *Boston Medical and Surgical Journal*, January 18, 1877.

[2] "A Treatise on Surgery," London, 1875.

[3] "The Practice of Surgery," London, 1876, vol. i., p. 596.

soon after the commencement of the attack. At what precise period the surgeon ought to refuse to perform an operation it is at present impossible to determine, but there can be no doubt that, the earlier the operation is done, the greater will be the chances of success. On the other hand, when the strangulation is tight, the parts speedily become so altered by swelling, adhesion, and softening, that no amount of force short of that capable of causing rupture will suffice to liberate them. A case is recorded by Messrs. Fagge and Howse[1] in which death had occurred within two days from the commencement of the disease, and in which, at the autopsy, it was found impossible to replace the whole of the invaginated bowel; and, in the accompanying table, a number of cases will be found, in which, at operations performed from three to five days from the beginning of the disease, reduction was ascertained to be either difficult or impossible. My own case is the only one that I know of wherein, in an intussusception primarily acute, an operation has been performed at a period earlier than three days from the first appearance of symptoms. In this, just eighteen hours had elapsed, and I should infer, from the behavior of the invagination when it was under examination, that the delay of a few hours more might have rendered reduction impossible.

3. There remain a considerable number of cases that cannot be included in either of the preceding categories, but in which an operation might possibly be indicated. Besides the well-marked acute and chronic forms of the disease, others are sometimes met with, varying considerably in severity, according to the danger of strangulation present, and in which the irregular succession and alternation of symptoms makes the interpretation of the latter more or less difficult and uncertain. The surgeon fears that whatever course of treatment he may adopt will prove a failure; but although in such cases active interference must always be hazardous, it will be plainly his duty to estimate, as accurately as he can, the pathological condition of the imprisoned intestine, and to resort to abdominal section, even at a comparatively late period, provided the patient's strength is not too much reduced, and

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[1] "Medico-Chirurgical Transactions," vol. lix., p. 94.

there appears to be no probability of a spontaneous separation of the affected part. But further data must be procured before a definite rule can be framed respecting this class of cases; and I think it extremely doubtful whether enough success will ever be obtained to warrant the frequent employment of the knife.

As intimated in an earlier part of this paper, abdominal section for intussusception has been rarely performed. In 1874 an elaborate and interesting statistical paper on the subject was published by Dr. Ashhurst,[1] who gave the details of fourteen cases, all that he had been able to collect up to the date of his publication. The table appended to this communication contains the records of twenty-one cases, thirteen of which can be found recorded by Dr. Ashhurst, while of the eight additional ones seven have occurred within the past three years in British practice, and the remaining one is the case herewith reported. I have omitted from the table Dr. Ashhurst's first case, as the nature of it appears to me doubtful. It will be noticed that, of the twenty-one operations recorded, one only was performed in the last, while the remaining twenty have been performed in the present, century.

Of twenty cases in which the result of the operation is given, seven recovered and thirteen proved fatal, thus showing a mortality of sixty-five per cent. So far, the figures appear to justify the operation, as the mortality is less than that of all cases taken together, which, according to Leichtenstern,[2] is seventy-three per cent. But this rough comparison of figures, if not a misapplication of statistics, is really of little value; and a much more discriminating analysis must be instituted before we can make any useful application of the facts to individual cases.

Out of twenty cases, the mortality of the operation in the different forms of intussusception is shown as follows:

	No. of Cases.	Recovered.	Died.
Intussusception involving the small intestine..................	1	1	..
Intussusception involving the large intestine..................	14	4	10
Seat of intussusception not mentioned..........................	5	2	3

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[1] *American Journal of Medical Science*, 1874, vol. i., p. 48.

[2] *Op. cit.*, Bd. cxxi., S. 17.

The rarity of operations for the relief of intussusception of the small intestine is doubtless due to the relative infrequency of the disease, the tendency to recover by sloughing, and the difficulty of making an exact diagnosis. Whether in adults the introduction of the hand into the rectum—according to the method recommended by Simon—will enable us to detect, and possibly to relieve, an intussusception of the small intestine, is a point which certainly deserves attention.

The *apparent* influence of age upon the success of the operation is exhibited by the following statement:

	No. of Cases.	Recovered.	Died.
Two years old or under	12	3	9
Sixteen years old or over	7	4	3

The operation in infants is thus placed in a very unfavorable light, the mortality being no less than seventy-five per cent., while in adults it is only twenty-seven per cent. But there is a fallacy lurking here, which can be exposed by a comparison of the cases with reference to the state of the intussuscepted parts at the time of the operation. And, as an indication of their condition, we may classify them into: first, those in which reduction or disinvagination was found to be easy; and, second, those in which reduction was found to be either difficult or impossible. Arranged in this manner, the nineteen cases available for comparison exhibit the following result:

	No. of Cases.	Died.	Mortality.
Reduction easy	7	2	22 per cent.
Reduction difficult or impossible	12	10	83 per cent.

Pursuing the same method of investigation, and separating the cases of infants from those of adults, we obtain results which may be stated thus:

	Adults.		Infants.	
Reduction easy.	Cases 3. Died 0.	Mortality, 0.	Cases 3. Died 1.	Mortality, 33 per cent.
Reduction difficult or impossible.	Cases 4. Died 3.	Mortality, 75 per cent.	Cases 9. Died 8.	Mortality, 88 per cent.

From the above statements I think we may safely conclude that the mortality of abdominal section is probably determined much more by the condition of the intestine than by the age of the patient. For we find—taking all cases together—the mortality of the operation to be twenty-two per cent. in the easy, and eighty-three per cent. in the difficult, cases; while in infants we obtain a mortality in easy cases of thirty-three per cent., and in difficult ones of eighty-eight per cent. This would encourage us to hope that in infancy the operation may not prove to be contraindicated, and that even if the success attending its performance falls somewhat below that obtained among adults, it may yet be quite enough to justify the surgeon in having recourse to it under certain circumstances. Furthermore, we must remember that in infancy the chances of spontaneous recovery are almost nothing, and that, consequently, when the usual methods of replacement have been fairly tried and proved unavailing, the child must either be abandoned to its fate, or submit to the risks of an operation. Nevertheless, I am far from advocating its performance in every case in which other means have failed, and believe that much discrimination will be necessary to prevent the operation from being brought into disrepute.

Whenever the patient is not seen until late in the disease, the question will of course arise whether reduction should be attempted by *any* mechanical means, or whether, on the whole, it will not be safer to abstain from all active interference, and trust to the chances of spontaneous cure by sloughing. When firm adhesions have formed, or gangrene is in progress, an attempt to effect reduction by distending the intestine would be likely to precipitate a fatal result by causing rupture. As to the plan of operating at all hazards, and cutting away, if necessary, the intussuscepted parts, I think it must be looked upon as a desperate expedient, which has obtained no sanction from past experience.

As I have already remarked, the practice of abdominal section for intussusception is comparatively novel, and many more facts must be obtained before we can go far beyond the region of conjecture. But the success which the operation has already achieved warrants the hope that its general adoption, in carefully-selected cases, will save many lives that would otherwise be lost, and mark an important step in the progress of abdominal surgery. In conclusion, I may be allowed to state briefly the more prominent facts and opinions contained in this paper, and upon which I would invite discussion :

1. The success which has already been obtained in the operation of abdominal section for intussusception is sufficient to justify its repetition, when other means have proved unavailing.

2. There is reason to believe that in intussusception, as in strangulated hernia, the great danger lies in delay, and that, in acute cases, the operation, to be successful, must be performed at a very early period, probably within twenty-four hours from the invasion of the disease.

3. In chronic cases, the operation is indicated when other means have failed, and there is reason to think that the invagination is still reducible.

4. It has been proved, by the case herewith related, that the operation may succeed in acute cases, if performed during the first eighteen hours.

5. The greater fatality of the operation in infants has been shown to be rather apparent than real, and it remains to be proved whether, in them, the performance of abdominal section for intussusception may not yield gratifying results.

6. In infancy the operation is the more justifiable, because during that period there is hardly any tendency toward spontaneous recovery after sloughing of the intestine.

No.	Reference to Operator.	Age and Sex.	Conditions, Symptoms, and Treatment before Operation.	Duration of Disease before Operation.	Result.	Remarks.
1	Velse, in Haller's Disputat. Anatom., 1751.	50 yrs., F.	Considerably reduced; had been treated unsuccessfully by enemata, cups, and fomentations.	Not stat'd.	Recovered.	Oblique incision on left side, four fingers' breadth from umbilicus; reduction easy; no adhesions.
2	Ohle; Rust's Magazine, Berlin, 1817.	50 yrs., M.	Intestine protruded beyond anus, and was cut into under the impression that it might be hæmorrhoidal. Bougies and enemata used without effect. Pain, vomiting, and tenesmus, well marked.	11 days.	Died about 12 hours after operation.	Oblique incision, five and a half inches long. Much force required in reducing colon, which was adherent for nearly twelve inches. *Post-mortem* showed general peritonitis with gangrene of the invaginated gut.
3	Fuchsius; Hufeland's Journal, 1825.	28 yrs., M.	Movable swelling near umbilicus, pain, vomiting, and constipation. Treatment, venesection, anodynes, cathartics, and administration of six-ounce doses of metallic mercury.	10 days.	Recovered.	Incision eight inches in length along outer border of right rectus muscle. Unable to reach upper end of intussusception, the operator opened the bowel at lower end, and pushed back the invaginated part, which measured over two feet in length.
4	Gerson, 1828, Am. Jl. Med. Sc., 1874.	12 w'ks, M.	Intestinal obstruction and hæmorrhage; tumor felt in inguinal region, and on examination *per rectum.*	Not stat'd.	Died in a few hours.	Oblique incision in left inguinal region parallel with Poupart's ligament; adhesions firm, and invagination extensive and irreducible. At a gangrenous point intestine was ruptured, causing operation to be abandoned.
5	Wilson, Am. Journ. Med. Sc., 1836.	20 yrs., M.	Stercoraceous vomiting and intestinal obstruction. Purgatives and metallic mercury were administered without effect.	17 days.	Recovered.	Incision five inches in length through linea alba. Invagination found in ileum, which was livid, and so firmly adherent, that considerable force was required to reduce it.
6	Hauf, Heidelberg Med. Annal. 1843.	36 yrs., M.	Pain, vomiting, intestinal obstruction, protrusion from anus of gangrenous bowel, and abdominal tumor. At time of operation, patient was prostrated with acute peritonitis.	4 or 5 days.	Died 9 days after operation.	Oblique incision on left side, above Poupart's ligament; adhesions firm; intestine ruptured, and operation abandoned. General peritonitis existed at time of operation.
7	Pirogoff, St. Petersburg, 1852.	16 yrs., M.	Symptoms of obstruction.	Considerable duration.	Died soon after operation.	The invaginated bowel being found gangrenous, the intestine was opened, and an artificial anus established.

No.	Reference to Operator.	Age and Sex.	Condition, Symptoms, and Treatment before Operation.	Duration of Disease before Operation.	Result.	Remarks.
8	Wells, Trans. Path. Soc., London, 1863.	4 mos.	Invaginated bowel felt in rectum. Injections, inflation, and sponge-probang failed to afford relief. Child nearly moribund when operation was begun.	4 days.	Died 5 hours after operation.	Incision in median line below umbilicus. Intestine released with difficulty, and punctured to relieve distention.
9	Laroyenne, Server; de l'Occlusion Intestinale, 1870.	Not menti'n'd.	Not mentioned.	Not menti'n'd.	Died.	Disinvagination could not be effected, owing to adhesions.
10	A. Johnstone, Brit. Med. Jl., Dec. 6, 1873, and Lancet, Feb 11, 1873, p. 738.	Infant.	Symptoms were those of acute obstruction.	Not menti'n'd.	Died in a short time from inflammation.	No difficulty was encountered in withdrawing the bowel.
11	Weinlicher, Schmidt's Jahrbücher, 1872.	6 mos., F.	Acute obstruction; vomiting, pain, discharge of bloody mucus, and tumor in left hypogastrium. Exploration of the rectum afforded no information.	3 days.	Died 6 hours after operation.	Incision three inches long at outer border of left rectus muscle; much difficulty in effecting disinvagination. Autopsy showed acute peritonitis.
12	Hutchinson, Med. Chir. Trans., vol. lvii., 1874.	2 yrs., F.	Vomiting, pain, occasional discharge of bloody mucus, and prolapse of the bowel through the anus. Abdominal tumor felt on left side. Symptoms not acute, and "no real obstruction of the bowels." Enemata tried without effect.	1 m'th.	Recovered.	Incision in median line below umbilicus. Reduction easy; no adhesions.
13	Duncan, Edin. Med. Jl., June, 1874.	5 mos.	Diarrhœa, griping, and discharge of bloody mucus. Abdominal tumor; intestine felt *per rectum*. Inflation and injection unsuccessful.	Not stat'd.	Died 24 hours after operation.	Median incision. Invagination extensive, and released by a combined process of taxis and traction; patient rallied well, and death occurred suddenly, apparently from syncope.
14	Marsh, Med. Chir. Trans., 1876.	7 mos., M.	Acute symptoms set in twelve hours before operation. Cæcum protruded from anus. Insufflation and injections tried without effect.	14 days.	Recovered.	Median incision below umbilicus. Invagination (ileo-cœcal) reduced without much difficulty, although its exposure required the removal from the abdominal cavity of a large proportion of the small intestine.
15	Howse, Med. Chirg. Transact., 1876.	33 yrs., F.	Gradually increasing symptoms of obstruction. Pain, vomiting, and abdominal tumor, varying in position. Inflation practised three times without success.	18 days.	Recovered.	Incision four inches in length opposite umbilicus. Tumor withdrawn from abdomen, and more than eighteen inches of intestine reduced. Invagination ileo-cæcal. No adhesions.

No.	Reference to Operator.	Age and Sex.	Condition, Symptoms, and Treatment before Operation.	Duration of Disease before Operation.	Result.	Remarks.
16	Hutchinson, Med. Chirg. Trans., 1876.	6 mos.	Symptoms acute from the beginning; pain, vomiting, evacuation of bloody mucus, and tenesmus; invaginated bowel felt in rectum and through abdominal wall. Injections had failed. Patient extremely weak at time of operation.	4 days.	Died 8 hours after operation.	Long incision in median line; invagination reduced with difficulty; no adhesion; some escape of fæces from a puncture of the small intestine, made to relieve distention. *Post-mortem* revealed almost universal peritonitis.
17	Bell, London Lancet, Jan. 1, 1876.	16 mos., M.	Vomiting, constipation, tenesmus, and passage of bloody mucus; tumor felt *per rectum* and through abdominal wall. Abdominal tympanites. Injections and inflation unsuccessful.	5 days.	Died 7 hours after operation.	Median excision extending from one inch above umbilicus nearly to symphysis pubis. Intestines congested; transverse and descending colon invaginated and irreducible. Artificial anus established by opening bowel above intussusception. *Post-mortem* showed slight adhesions, much induration of the invaginated parts, and recent lymph between intestinal folds.
18	British Med. Jl., Sept. 16, 1876.	9 mos.	Retching, and bloody stools. Ileo-cæcal valve recognized on surface of intestine protruding from anus.	7 days.	Died a few hours after operation.	Disinvagination effected by squeezing intestine. Patient died in collapse. *Post-mortem* showed peritoneal adhesions, and hæmorrhage in mesentery. It was thought that earlier treatment might have been successful.
19	Morris, London Lancet, Jan. 20, 1877.	12 yrs., M.	Pain, vomiting, constipation, and passage of blood from the bowel. Tumor felt in rectum. Injections tried without success.	7 days.	Not known; case reported on day of operation.	Abdominal section revealed an intussusception of ileum, with sloughing of intestine; seventeen inches of ileum removed, and divided ends stitched to margins of opening in abdominal wall.
20	Howse, Med. Chirg. Trans., vol. lix., 1876.	5 mos.	Muco-sanguinolent discharges. Ileo-cæcal valve had protruded from anus for some days. Case had been mistaken for prolapse of the rectum.	1 m'th.	Died a few hours after operation.	Intestine, which was softened, ruptured under gentle traction. Four inches cut away, and healthy intestine above and below united by sutures.
21	Sands, case herewith reported.	6 mos., F.	Pain, vomiting, tenesmus, and passage of bloody mucus. Tumor felt in rectum and through abdominal wall. Inflation and injection only partially successful.	18 hours.	Recovered.	Median incision below umbilicus. Cæcum invaginated, indurated, and ecchymotic. Reduction effected by squeezing intestine rather than by traction.

Art. II.—*Analysis of Seven Hundred and Seventy-four Cases of Skin-Disease, treated at the Demilt Dispensary during the Year* 1876, *with Cases and Remarks on Treatment.*

By L. Duncan Bulkley, A. M., M. D., Physician to the Skin-Department, Demilt Dispensary, New York; Fellow of the New York Academy of Medicine, Member of the New York County Medical and Dermatological Societies; Secretary of the American Dermatological Association, etc.

(*Concluded from April Number.*)

5. Tinea.—The vegetable parasitic diseases, which were present in larger proportion this year than during the preceding—4.8 against 3.4 per cent.—were represented by thirty-eight cases, of whom twenty-three occurred in male and fourteen in female subjects. These affections were thus divided: First, those due to the parasite *trichophyton* (*a*), tinea tonsurans (ringworm of the head), nine cases; (*b*), tinea circinata (ringworm of the body), eight cases; (*c*), tinea sycosis, seven cases; (*d*), eczema marginatum, one case; total, twenty-five: second, that caused by the *microsporon furfur*, tinea versicolor, nine cases; third, that due to the *achorion Schönleinii*, tinea favosa, or favus, four cases.

One case of tinea circinata was peculiarly interesting from the large extent of surface affected, and the close resemblance which the eruption presented to tinea versicolor. It was in the person of a married woman aged twenty-nine, who at first exhibited an eruption upon the back and part of the chest, and it was at once thought to be the latter disease, there was so little of distinct character to the appearances. On further inquiry it was learned that the same existed on the arms, but here its features were no clearer. A microscopic examination of the scales and hairs showed that it was due to the trichophyton, and not to the microsporon furfur, and at a later visit it was discovered that the disease extended down on to the abdomen and thighs, and even on the upper part of the legs, and in this latter situation the characteristics of tinea circinata were quite distinct. Treatment removed the disease quickly. She first used citrine ointment diluted, and was afterward given the *liquor picis alkalinus*, to be rubbed in full strength, which proved much more efficacious than the ointment.

A little girl, aged eleven years,[1] presented an unusual form of tinea circinata on the right leg. The eruption seemed to advance in a spiral, there being several rings, or rather oval lines within each other, which, on careful tracing, were found to be continuous, forming a spiral. The parasite was found microscopically.

A very unusual proportion of cases of parasitic sycosis is recorded, namely, seven in the entire thirty-seven. While not insisting on the parasitic nature of all these cases beyond a peradventure, we feel confident that almost if not quite all of them were of this nature. In several of them microscopic study revealed the parasite. This examination was not made in every case, but the clinical features were carefully studied, as there were at the same time in attendance many cases of eczema barbæ, and there was abundant opportunity of comparing the diseases. One patient was a stableman, and another a butcher, who could readily have acquired it from animals; another case was in a man of forty years, who brought a child with tinea tonsurans, of well-defined character, and exhibiting the parasite microscopically.

The cases of the next variety of vegetable parasitic disease, *tinea versicolor*, sometimes called pityriasis versicolor, and wrongly designated chloasma or liver-spots by some, presented no specially interesting features. These were nine in all, six females and three males, ranging from eighteen to fifty-two years of age.

Four cases of *tinea favosa*, or favus, were observed, three of which possessed very great interest, inasmuch as they affected the epidermis, and were on other portions of the body than the hairy scalp, which is the more common seat of this affection. The fourth case affected the head of a tailoress aged twenty-one. The cases of epidermic favus were confirmed by the microscope.

The usual treatment of these parasitic diseases was diluted citrine ointment, oil of cade, liquor picis alkalinus, etc. Sulphurous acid, which I greatly prefer, was not much used, because of the difficulty of keeping it strong, and of properly using it in dispensary practice. Bichloride of mercury was not used at all, on account of the danger attending its employment in ignorant hands.

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[1] *Archives of Dermatology*, July, 1876, p. 311.

The youngest patient affected with a vegetable parasitic disease was a boy of two years, with well-marked tinea tonsurans. There was also a boy three and a half years old, with favus epidermidis. The oldest patient was aged fifty-two, a man with tinea versicolor.

6. Lichen.—In my former reports I have given my reasons for maintaining the existence and comparative frequency of the disease lichen of older writers, and I am the more confirmed in the tenability of the position by another year's clinical experience. It will be noticed that I have recorded twenty-four cases as papular eczema, besides which there were, of course, very many other cases of eczema where papulation was more or less marked. I have recorded this year also thirty cases as lichen, occurring in nine males and twenty-one females. Of these, twenty-eight cases were entered as acute lichen, one as chronic, and one of that rather peculiar and more-recently recognized lichen planus.. The youngest patient was a male child aged seven ; the oldest, also a male, of sixty-five years. I do not recall anything new or peculiarly interesting in regard to the cases or their treatment.

7. Urticaria.—Twenty-eight cases of urticaria were recorded, which exhibited all the phases of this remarkable affection. In dispensary practice, where the time of attendance is limited to certain days and hours, it is rather the exception to observe the eruption of urticaria in its typical stage. Comparatively few cases have exhibited well-marked wheals at the time of visit, and it is frequently necessary to depend upon the history of the case, verified by careful cross-questioning, and upon certain after-lesions on the skin. By the latter I mean the papular eminence which is generally left for a while after the wheal subsides, together with the marks of scratching.

Most of the cases were of acute character; a few were recorded of several years' duration; but few returned after the first visit, and many of them were probably relieved at once. The ages may be seen in the following :

TABLE VII.

Age of Patient.	Males.	Females.	Total.
10 years of age and under	4	..	4
10 years to 20 years of age	3	5	8
20 years to 30 years of age	..	7	7
30 years to 40 years of age	3	..	3
40 years to 50 years of age	3	..	3
50 years to 60 years of age	1	1	2
Over 60 years of age	1	..	1
Total	15	13	28

The treatment was usually cathartic and alkaline, considerable use being made of what we have often referred to as Startin's mixture, of sulphates of iron and magnesia, etc.; also of the well-known rhubarb and soda mixture.

8. Dermatitis.—There was little of interest in the cases classed as dermatitis, with which there were twenty-three patients, ten males and thirteen females. Six of these were due to traumatic causes, five to the effects of heat and cold, four to poisons, four appeared to be simply idiopathic inflammation of the skin, and in four instances it was simply recorded that dermatitis existed. Of the cases of dermatitis venenata, one was apparently the result of a spider-bite, which caused very considerable dermal and sub-dermal inflammation in the left forearm of a little girl seven years old, which suppurated, was opened, and discharged unhealthy pus for some time.

9. Furunculus.—In the twenty-one cases of furuncles (eleven males, ten females) the same plan of treatment was pursued with success which has been mentioned in former reports, namely, the hyposulphite of soda, in moderately large doses, three or four times daily, or even oftener, on an empty stomach, and well-diluted. Of these cases, eleven, or more than one-half, were entered during the months of July and August.

10. Psoriasis.—Many writers have regarded psoriasis as one of the most frequent of skin-affections. It here stands tenth on our list, and shows even a less percentage to the whole number than was observed last year, which was unusu-

ally low. In the present analysis it forms but 2.4 per cent. of the whole, in the preceding year it formed 3.2 per cent. The cases were very evenly divided between the sexes—nine males and ten females. In the report last year the females were three times the males in number, an illustration of the fallacy of drawing any important conclusions from a single analysis, or a single year's experience. The youngest patient with psoriasis was aged eleven years, a girl; the oldest sixty-six years, a woman, whose daughter was the subject of very marked and severe lupus vulgaris. The age of the patients when applying for treatment may be seen in—

TABLE VIII.

AGE OF PATIENT.	Males.	Females.	Total.
10 years to 20 years of age	3	3	6
20 years to 30 years of age	3	1	4
30 years to 40 years of age	1	2	3
40 years to 50 years of age	1	3	4
50 years to 60 years of age	1	..	1
Over 60 years of age	..	1	1
Total	9	10	19

The greatest recorded duration of the affection was thirty years, in a woman of forty-one. In one case, that of a boy sixteen years old, the disease had just made its appearance. Very many of the cases were of the variety psoriasis guttata, though some of them were very extensive, in one or two instances covering almost the entire body. In one man, John R., aged thirty, all the limbs were completely involved, even the flexor surfaces of the knees and elbows; upon the body the eruption was more scattered, in characteristic patches. As the disease began to yield, the flexors cleared off first, and here and elsewhere the more recognizable forms of the eruption appeared. In another case, of a woman about forty years of age, the eruption, which affected the arms only moderately, was so confluent on the thighs and legs as to cause very much pain and discomfort with the burning. In another patient, a married woman,[1] aged thirty-three, the hands and wrists were so completely covered with the eruption that the appearance was exactly that of a very aggravated eczema: deep fissures existed, causing great pain. Farther up the arms the lesions were very typical of psoriasis.

Psoriasis is perhaps the most unsatisfactory of all diseases of the skin to treat in dispensary practice, because of the irregularity of the attendance of patients, and because they are so readily discouraged at the necessarily tedious nature of the disease and its treatment. In many instances, therefore, I have simply sought to give relief from the symptoms, which are peculiarly annoying, having learned by experience that in cases which have already lasted for several years the patients will not persist long enough to make it an object to attempt the cure. I have therefore made large use of acetate of potassa, which almost always accomplishes much for this disease, and which, together with proper local treatment, has in my hands removed the eruption from many psoriatic patients. When the eruption is of recent date, I take great pains to impress upon the patient the advisability of persisting in treatment, and very generally give arsenic, with other measures.

I am sorry not to be able to report further on the use of phosphorus in psoriasis; I was obliged to discontinue its employment because the results seemed so unfavorable: this class of patients are so careless about medicines that they readily take an overdose, or do something to render the action of such drugs uncertain, or even dangerous.

In several instances the results of treatment have been gratifying; in the very severe general psoriasis, alluded to above, almost the whole eruption had disappeared before the expiration of two months, and this alone on the acetate of potassa, about thirty grains three times daily. In a boy of fifteen, with recent psoriasis of a very typical, nummular variety, the eruption disappeared almost entirely in about two months, under increasing doses of arsenic, in the form of De Valangin's solution. He began to show signs of the physiological action of the drug when about six drops thrice daily were reached, and at this time the disease was vanishing very rapidly.

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[1] *Archives of Dermatology*, April, 1876, p. 223.

11. SCABIES.—Nineteen cases of scabies were recorded; of these, nine were in male and ten in female subjects. There was nothing unusual in them; the younger patients, with more delicate skins, were mainly treated with storax and balsam of Peru; the males, and those better able to bear it, received sulphur ointment. The ages ranged from four months to forty-two years. The latter patient was the mother of three children, aged respectively eight months, four years, and eight years. There was another family of three, seven and eight years respectively. There were no cases of scabies entered during the months from March to September, this being a disease much more commonly observed during the colder seasons, it being known also that scabies is far more prevalent in cold than in warm countries. In McCall Anderson's statistics from ten thousand hospital skin-cases in Glasgow, scabies formed a trifle more than one-quarter of all the cases.

12. ULCERS.—The cases of ulcers occurred entirely on the lower extremities, and the large majority of them were due to varicose veins, or, perhaps it would be more proper to say, were the results of the same causes which produce varicose veins, and were, as a rule, accompanied by them. Primary venereal ulcers do not appear in this department; the later ulcerations of syphilis are classed under their proper head: where the ulcers were plainly a part and result of eczema they were referred to that disease, and excluded from the present list.

There were seventeen cases of ulcers, ten in females and seven in males. The ages of the patients ranged from thirteen to seventy-seven years; in some of the cases, especially in young persons, the ulcers were of traumatic origin. They all occurred in persons obliged to stand much of the time, as in mothers of families, cooks, wash-women, laborers, a blacksmith, printer, etc. In a good share of the cases favorable results were reached by the ordinary methods of treatment, bandaging being also largely employed. The local application of chloral in solution, five to ten grains to the ounce, as reported on last year, has still given good results.

13. ERYSIPELAS.—All of the cases of erysipelas affected the face, and in all of the thirteen cases, six males and seven females, the results of treatment were very satisfactory. The treatment, I believe, was the same in every case, with slight variations, and all but three of the cases were seen two or more times, and in all of these the change was very marked on the second visit, which was generally two or three days after the first. The treatment consisted in from two to four compound cathartic pills (U. S. P.), taken at night, and large doses of the tincture of the chloride of iron (♏x–xxx) every two or three hours. The local treatment was invariably keeping the face well dusted with powdered starch or flour. The patients were generally kept from work for a few days. The results of treatment may be judged from the fact that ten of the cases reappeared at the clinic within a few days greatly improved, the success being in a large measure attributable to the promptness of treatment. None of the cases occurred during the months of November, December, January, February, or March.

14. HERPES.—Thirteen cases of herpes were recorded during the year, seven in male and six in female patients; of these, ten were herpes zoster, zona or shingles, and three herpes labialis. The cases of zoster were remarkable from the fact that six of the ten cases occurred in children under ten years of age; of these four were females. The youngest was a girl aged eight months, with a well-marked thoracic herpes of the left side; next came a boy of three years, with a zoster of the right leg; the oldest patient was a woman of thirty-eight, with left thoracic and brachial zoster. The youngest patient reported with zoster in my last two analyses was three years last year, and two and a half the previous year; the oldest, seventy-three. The patient aged eight months was the youngest I have ever seen with this affection. Neumann mentions five or seven months as the earliest date at which it has been seen. With us it was more common on the left side than on the right.

The treatment usually employed was dusting the surface with starch-powder, and sewing on a linen band well dusted with the same, which was to be left *in situ* for a week or so, allowing the eruption to dry up beneath; generally, some tonic treatment was also given, as most of these patients are in a poor condition; in none of the cases was neuralgia complained greatly of.

15. Pruritus.—The diagnosis of pruritus is always a most unsatisfactory one for the physician, because he is obliged to trust so entirely to the statements of the patient, with no guidance as to the cause, and often no visible signs to confirm the truth of what the sufferer says: quite as unsatisfactory is it also to treat in the majority of cases, for a whimsical patient may deceive the physician in regard to the effect of remedies. That we do constantly meet with cases which present no other symptom than an itching of the skin, is a well-assured clinical fact, and of such cases there were twelve recorded during the past year, eight males and four females. Of these, three were entered as pruritus ani, two pruritus senilis, one pruritus genitalium, one pruritus hiemalis, and in five there was simply general itching of the skin complained of. It will be remembered that we exclude lice as a cause of this itching, the cases due to them being mentioned under the term phthiriasis; nor do we intend, by the term pruritus, any cases of prurigo, as described by Hebra, and seen occasionally in this country, where there is a true papular lesion inseparably connected with the disease. We were also careful to exclude cases of urticaria.

The cases of pruritus ani were probably due to hemorrhoidal congestion, or possibly to worms. They were certainly greatly relieved by turpentine-injections. In cases of pruritus senilis, a faulty kidney action is frequently the exciting cause, and our patients generally are much benefited by acetate of potassa internally, and externally by a wash of carbolic acid two drachms, caustic potash one drachm, and water four to eight ounces. The alterations of age in the skin are, however, undoubtedly an element in the causation of pruritus senilis, and only temporary relief can be expected.

There was but one case of the pruritus hiemalis observed, affecting the thighs of a young man aged twenty-three.

16. Impetigo Contagiosa.—Quite a number of cases of this curious disease were seen during the year, nine in all, three times in male and six times in female subjects. They

mostly occurred in groups, two families having three patients in each, one two, and in one child, twenty-one months old, the disease could not be traced to any others. They all presented much the same features as described by Tilbury Fox, and recognized by others, except that the crusts may be more abundant and darker where the disease occurs among the poorer and dirtier classes. The cases were all in children under seven years of age, except in one instance, where a father acquired it from his child aged seven.

17. Epithelioma.—After considerable thought and study of the cases, I have decided to omit the term rodent ulcer (*ulcus erodens*), which appeared in my last report, and to include the lesions which might be thus named under the term epithelioma. My reasons are their close approach in clinical features, and the great similarity, if not identity, which has been shown between all these cases microscopically. Among older writers, lupus, especially its ulcerative form, has been frequently confounded with epithelioma, and *noli me tangere* has undoubtedly been used as a designation for both lupus and epithelioma; but, in the present instance, lupus has been carefully excluded.

Of the seven cases grouped as epithelioma, three were in men and four in women. The youngest and oldest patients were both women, aged respectively thirty and sixty-five years. In one case, a man aged forty-three, plastic operations had been performed four times by a leading surgeon, a large flap being taken from the forehead to replace a portion of the nose which was removed together with the disease. The destructive process had attacked the cicatrix, and an ulcerating epitheliomatous surface occupied both nostrils, extending deep into them, also the left upper lip, which was drawn up by cicatricial action. Little could be done for the unfortunate case; acetate of zinc seemed for a while to check the ulceration, and it was thought some portions would heal, but no permanent results have been obtained. Of late he has used iodoform in ointment (ʒss ad ℥j), which he thinks checks the discharge and relieves the pain which the tense condition of the ulcerated surfaces induces.

Two of the cases were very successfully treated by means of Marsden's mucilage, in the manner described elsewhere[1] (equal parts of arsenious acid and powdered gum-acacia), and were followed to the result of a small, smooth, and healthy cicatrix. In one instance the single epitheliomatous structure, about a third of an inch in diameter, was situated at the junction of the left ala of the nose with the cheek, on a mason aged forty-one; in the other, a larger one was located on the right temple of a woman aged fifty. In one old woman of sixty-five, on whom there were two very superficial epitheliomata, one in the centre of the forehead, and one on the right temple, diluted citrine ointment (1 : 3) was employed as a placebo for a few days, under which they smoothed off, leaving surfaces so near to health that it was not deemed advisable to adopt any more severe application, and she continues its use occasionally.

18. Erythema.—Of the seven cases of erythema, three males and four females, three were of the variety multiforme, two of erythema nodosum, one erythema papulatum, and one from the effect of heat. Many of the cases were very transient in character, the result of digestive disorders. The two cases of erythema nodosum were in a boy aged eight years and a girl of fifteen.[2]

19. Purpura.—Seven cases of purpura were seen and treated during the past year, five in male and two in female patients. The ages of the patients were as follows: thirteen, thirteen, seventeen, thirty-five, thirty-nine, forty, and forty-two years respectively. They were all treated with fluid extract of ergot, and as two of the cases have appeared in print elsewhere,[3] with full comments on the use of the drug in these cases, I will not dwell on this here. I may, however, state in brief that it was employed both hypodermically and by the mouth with most striking results. Five of the cases were followed out; two failed to return after the first visit.

In one case, that of an anæmic girl of thirteen years, who had rheumatic symptoms very markedly developed, and who had far-advanced phthisis of the left lung, with distressing cough, the ergot was more slow in acting, but finally succeeded in checking the purpura, which developed anew on several occasions. She was under observation nearly six months, gradually failing with the lung-trouble, with which she finally died, as I learned from Dr. Billington, the visiting physician of the dispensary, five months after she disappeared from my clinic. He stated that the purpura ceased to appear some time before her death. While under my care she received also, from time to time, iron, quinine, and cod-liver oil; but the ergot was also administered more or less freely, as it seemed to check the purpura, and restrained somewhat the epistaxis, which occurred frequently.

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[1] New York Medical Journal, August, 1876.

[2] *Archives of Dermatology*, January, 1877, p. 133.

[3] *The Practitioner* (London), November, 1876.

In several patients it was observed and noted that marked improvement of the general health and color followed the use of the ergot alone, as in both the cases referred to as reported in the *Practitioner;* also in a broken-down barkeeper, aged forty, this effect of the ergot was very plain. In this case the eruption was checked at once, and had greatly faded at his second visit, at the expiration of seventy-two hours. From our study of the subject, as detailed in the article alluded to, we have concluded that ergot is the remedy *par excellence* for purpura, and that it should be employed at once and fearlessly, especially in cases of the hæmorrhagic form. It may be given by hypodermic injection, with more prompt results than by the mouth, and the fluid extract may be thrown beneath the skin in doses from ten to thirty minims, with perfect safety if due caution is observed.

20. VERRUCA.—Little remark is called for in regard to the six cases of warts which applied for treatment, with the single exception of a little girl of eleven years, whose warts were treated alone by arsenic, given internally, and with a good and rapid result. There were in all ten warts on her hands and face, and she was given four or five drops of De Valangin's solution of chloride of arsenic thrice daily, with no local applications. Three weeks after her first visit, it was recorded that several of the warts had disappeared, and, at the expiration of seven weeks, but one remained.

21. HYPERIDROSIS.—This peculiar functional disorder of the sweat-glands was presented for treatment in four cases,

three males and one female. In one case, that of a young man of twenty, it was general, in another of the same age, the head and neck were affected, and in two cases the feet were the seat of the disorder, the hands being also affected in one of the latter, a girl of fifteen years. In the first case very prompt results were obtained from the internal use of atropine, given in doses of about one-ninetieth of a grain thrice daily, which was increased to one-sixty-fourth of a grain in a few days. In the case of the sweating of the hands and feet of the girl of fifteen, one foot was painted once or twice a day with tincture of belladonna, which I have used heretofore with good success, and the other was kept wrapped all the time in the unguentum diachyli of the Germans. After a few days it was reported that both feet were doing very well, but a little later she concluded that the diachylon served the best, which was evident on examination, although the foot on which the belladonna had been employed was much better. The epidermis, which had been macerated by the profuse sweating, so as to be white and soggy, and tender to press upon, was hardened, and now walking gave no pain. The diachylon was continued to both feet, and a few weeks later the skin of the feet seemed normal, and she remains cured after about a month's treatment.

22. Lupus.—There were four cases of lupus observed during the year, all affecting the face of females. Two cases were of the erythematous variety, one of the scattered form, where isolated patches affected various parts of the face, also both ears, in a woman twenty-six years old. The other was in a girl of eleven years, where the whole face was very characteristically covered with lupus erythematosus, also the backs of the hands in scattered papules, and the palmar surfaces of some of the fingers. There were also some scattered patches of small size on the top of the head.

Of the two cases of lupus vulgaris, one occurred in a woman aged forty-four, in whom it had lasted since thirteen years of age. The disease occupied the entire face and ears; it had destroyed the end of the nose, and produced some ectropion; the lips also were much thickened, and eating was somewhat difficult. The second case of lupus vulgaris was of small extent, and occupied the right side of the nose, near the bridge, in a woman forty years of age. The three first-mentioned cases came late in the year, and it would be premature to report anything in regard to their treatment. The last case came once in February, but has not returned.

23. Scrofuloderma.—Three cases were entered as scrofuloderma; thereby are indicated the strumous abscesses generally observed on the neck of those exhibiting the characteristics of scrofula. There were no features of particular interest in these cases.

24. Varicella.—The eruptive fevers are, as a rule, excluded from this class, and attended at their homes by the visiting physician. The only cases of them were the three of varicella, all in male children. They were of the usual mild character.

25. Adenoma.—Although not coming under the head of skin-diseases, this enlargement of the lymphatic glands may have closer connection with cutaneous lesions than is usually supposed; indeed, lymphadenoma cutis is now recognized as definite affection of the integument. In one of these cases, a boy aged five years, there was first a scrofulous eczema about the head, upon the disappearance of which the glands of the right side of the neck began to enlarge and harden, which process has continued steadily in spite of varied and appropriate treatment, until now the entire right side of the neck, from the angle of the jaw to the clavicle, is filled with a hardened lobulated mass; the skin over it is pale, the veins rather prominent. The boy's health is now evidently suffering, he has lost appetite, has become anæmic and weak, and is fast declining. In the other case, that of a boy three and a half years old, there is a large mass of indurated glands in the left side of the neck, more than filling the space between the cheek and clavicle, which has steadily increased under observation, the boy gradually failing. The skin over this is in some places purplish, but apparently healthy, and the veins are enlarged and tortuous. Arsenic, which has proved serviceable for these swellings in the hands of some, has failed to remove the disease in these cases; likewise iodine, cod-liver

oil, etc. In the case first mentioned, arsenic has given the most benefit.

26. Chloasma.—The brownish discoloration on the face which is sometimes confounded with the fawn-colored eruption on the breast, the parasitic tinea versicolor, was noted for treatment in but two cases, although it was observed a not inconsiderable number of times in females who came for other complaints. In one of these cases there was also xanthelasma or vitiligoidea at the same time, a combination which I do not remember to have ever met with before.

We have seldom found the following prescription to fail in removing these discolorations pretty promptly; though, of course, they may return again and again, generally from uterine or ovarian disease or hepatic derangement: ℞. Hydrarg. bichlor., gr. viij; boracis pulv., ʒ ij; acidi acetici dil., ʒ ij; alcohol, ℥ ij; aquæ ad ℥ iv. M. If it roughens the skin too much, omit its use for a few days, and apply sweet cream.

27. Ichthyosis.—Two boys, aged three and ten years respectively, were brought in the month of May with this peculiar and incurable disease. In the case of the boy aged ten,[1] it was recorded that it had lasted since he was two years old. I cannot find notes of the other case. They were both seen but once, and were given alkaline and starch baths, with subsequent inunctions of cosmoline.

28. Xanthelasma.—One of the two cases of xanthelasma, in a woman aged fifty-eight, exhibited the disease in a very marked and extensive degree. The whole face, extending from ear to ear, and from the chin to within half an inch of the roots of the hair, with the exception of a portion of the cheeks, was covered with a scattered, cream-colored eruption of spots, varying in size from a line to a quarter of an inch in diameter, circular and of irregular shape. The surface of these was smooth and shiny, and soft and velvety to the feel. There is slight elevation. In the other case, that of a woman of thirty, the disease was much less pronounced, and occupied mainly the eyelids, and, to slight extent, the side of the nose.

Both patients were constipated. The first one once had been subject to "bilious attacks," and the second one had jaundice as a girl.

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[1] *Archives of Dermatology*, January, 1877, p. 135.

29. Abscessus.—There was nothing of interest in the one case of dermic abscess treated.

30. Alopecia Areata.—But a single case of alopecia areata was entered during the year,[1] and this in a young girl of nineteen, in whom the disease had carried off nearly the entire mass of hair, leaving the head almost as if shaved. The history was that it began as a small spot, an inch or so in diameter when first noticed, which was followed by others very shortly, all of which coalesced to produce wellnigh perfect baldness; there were still some islets of hair, and a few scattered hairs over the bald portions, as is not unfrequently the case. The ordinary stimulating treatment was employed with fair success for a time, but she ceased attendance before the real result could be learned.

31. Carcinoma.—The disease in this case was seated on the right breast of a married woman aged fifty; the case was transferred to the surgical department for operation.

32. Eruptio e Copaiba.—A young man twenty-four years old, who was being treated in the surgical department for gonorrhæa, and was taking copaiba pretty freely, presented himself with a papulo-erythematous eruption covering almost the entire surface of the body. It possessed neither the characters of erythema exclusively, nor those of urticaria; it was composed of erythematous blotches, somewhat raised, of irregular shape and size, some round, some irregular, the elements of it being very symmetrically distributed on each side of the trunk. The upper arms and thighs were affected, as also the head and neck. All of the spots were of a uniform pink color; they were quite closely set; they had existed a day or two without much change, and they gave rise to very considerable burning and itching, especially when exposed to the air; there had been no disappearance of individual blotches, with reappearance of others, as in urticaria. He was advised to desist from copaiba for a few days, and take Rochelle salts several times daily.

33. Morphœa.—Of this remarkable affection, which has

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[1] *Archives of Dermatology*, July, 1876, p. 312.

but recently acquired a definite place in dermatological literature, there was one very marked and almost typical case, in the person of a well-developed and apparently healthy single woman, of thirty years.[1] She first came to the dispensary February 29, 1876, and has attended quite faithfully ever since. The disease began about twelve months previous to the first visit, and had increased steadily up to that time. When first seen there was a patch of diseased skin on the right leg, commencing about four inches above the popliteal space, and extending downward and forward to within two inches of the internal malleolus. The diseased surface was of a dirty yellowish-brown color, mottled, surrounded by an erythematous, pinkish halo, which was well defined toward the yellow skin, and shaded off insensibly into the healthy color of the adjacent surface. In feeling, the yellow portions were hard, as if a piece of boiled sole-leather had been inserted into the skin, and the margin of the disease could be detected by simply passing the finger from the healthy to the affected part, with very slight pressure. The entire diseased tissue was irregular in shape, as if composed of several isolated patches, and latterly there have appeared several scattered spots of redness on the lower part of the thigh, in the centre of one of which has formed the yellowish-brown, sole-leather-like, hardened skin. There is, perhaps, a very slight depression of surface in some of the older portions, but in the main the diseased is about on a level with the healthy skin; there is no tendency to contract, as is so markedly the case in scleroderma.

34. NÆVUS.—But one case of nævus was entered, although I recall several occurring on patients treated for other diseases. This was in a male infant of fifteen months, who had a single vascular nævus on the radial surface of the right forearm, near the thumb; the child was seen but once, and no active treatment attempted.

35. PEMPHIGUS.—A girl aged sixteen exhibited this disease in a very severe, gangrenous form; she died about six months after being first seen, with well-pronounced and rapid phthisis.

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[1] *Archives of Dermatology*, January, 1877, p. 102.

36. Pigment-Staining.—On the inner and anterior surface of the left leg of a sailor aged thirty-four, there was observed a brownish pigmentation, covering nearly half the surface of the lower half of the leg, which was apparently without cause, as the patient, who was a very intelligent man, gave no history of a previous eczema, syphilis, or ulceration. The veins were varicose to a moderate degree.

37. Pityriasis Rubra.—One case was recorded with this disease, a woman aged forty-five; but, as no notes were made of the case, the details cannot be given.

38. Roseola.—No especial interest attaches to this case, which occurred in a boy of six years.

39. Strophulus Pruriginosus.—This case approaches the most nearly to what is known as true prurigo, of any which appeared at the clinic; but, because of the excessive rarity of the affection in this country, I should hardly be willing to name it prurigo until after longer observation, and have, therefore, following Hardy, called it strophulus pruriginosus. It occurred in a female child, seventeen months old, who exhibited a papular eruption, covering especially the thighs and feet, but also to a lesser degree the body and arms. The papules were many of them scratched, but there were some of a flesh-color, and more perceptible by feel than by sight. There was very considerable improvement under the sirup of the iodide of iron, and an application consisting of two drachms of tar-ointment to six of zinc-ointment.

In concluding this *résumé* of my year's work in the Demilt Dispensary, I would commend to my colleagues and to all occupying public positions, and indeed to every practitioner, the habit of recording, to the utmost possible degree, facts in relation to disease and its treatment. Cases which at the outset seem of the least interest are often found to possess the greatest when it is too late to obtain the exact data in regard to them; and many will agree with me, that very frequently therapeutical and other items which, while the case is fresh, appear of the greatest importance, have been lost because not recorded at the time.

No one is better aware than myself of the very great difficulty of accomplishing this, and no one can appreciate more than I do the imperfections of this present analysis and study; but, as remarked in my last year's report, it is put forth as it is, with the desire "to add the results of American experience in the observation and treatment of diseases of the skin, and to excite, if possible, more interest in their study." This glance back over the labors of the year has been a most pleasant and profitable one to me, and I trust may not be without advantage to others as well.

Art. III.—*On Light in some of its Relations to Disease.*[1] By George T. Stevens, M. D., Albany, N. Y.

So important, so indispensable, in fact, is the agency of light to life that Lavoisier was warranted in the assertion that, "without light, Nature were without life and soul; and a beneficent God, in spreading light over creation, strewed the surface of the earth with organization, with sensation, and with thought."

To speak of such an agency in relation to disease as cause and effect may appear paradoxical, especially when we remember that, in the recent great advances in sanitary subjects, in few if in any other directions have the efforts of the sanitarian been so well rewarded as in letting light into dark places. Like the perturbed spirits which of old were supposed to be doomed to walk the night, but which vanished at the approach of dawn, disease and death have often fled before a beam of light which modern science has admitted into some dark corner.

It is said that soldiers quartered on the sunny side of a barrack possess great advantages in point of immunity from disease over their comrades who occupy the shady side; and experience in large hospitals seems to justify the conclusion that patients confined by lingering and debilitating diseases do best in the wards most exposed to the sunlight.

If light, then, is essential to life, is a destroyer of ferments and contagions, and is conducive to the recovery of the sick, how can it be regarded as a cause of disease? We may in a general way reply that any agent which is powerful for good is also potent for evil—that there is no light without its compensating shadow. But to be more specific, and to come as directly as possible to the subject of discussion to-night, let me say at once that I propose only to consider briefly the important *rôle* which light plays in producing or in predisposing to certain classes of disease, as it passes through the transparent media of the human eye.

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[1] An address read before the Albany Institute, December 19, 1876.

It will be necessary, before advancing to the main discus sion of such a subject, to review briefly some elementary principles which are well established in regard to the classes of troubles which will engage our attention, as well as to glance hastily at some points in the physiology of vision.

We frequently meet with affections of the conducting nerves in which pains, convulsions, loss of sensibility, or other unnatural phenomena exist, but in which the pathologist, when he examines the affected nerves, or their surroundings, or even the more central parts from which these nerves are derived, finds either no appearance of morbid change, or, if any such changes are found, they are not constant and cannot be regarded as characteristic. Such affections are called functional nervous affections, or neuroses. Among them are neuralgia, the more common forms of headache, epilepsy, chorea, more commonly called, St. Vitus's dance, hysteria, and insanity. Pathologists have exercised great patience and industry in vain endeavors to find some constant organic condition which should lead to a better understanding of some one or all of these distressing and often alarming affections.

Failing in this, many able and earnest observers have devoted themselves to the careful study of the history and attending phenomena of these neuroses, with the result of collecting and arranging a great many most valuable facts. Among the most important and most interesting facts relating to the cause of these neuroses are those which show that there exists in a very large proportion of them a predisposition either hereditary or acquired by the individual subject to them.

This predisposition to functional inervous affections is well established by the observations of careful and candid investigators, and is verified by the daily experience of many physicians. Persons possessing this unfortunate predisposition are liable from slight immediate causes to such troubles as neuralgia, headache, epilepsy, hysteria, insanity, and even consumption. In a large proportion of instances this predisposition is hereditary; and this inherited relationship to disease, while it has been carefully investigated by a few of our most able observers, has by the greatest number of practitioners of medicine been altogether too much overlooked. One who will investigate these hereditary tendencies will be surprised to find in how great a proportion of the victims of nervous trouble there is a family history of kindred affections. Thus a person who is an habitual sufferer from neuralgia may remember, when questioned, that one of his grandparents was also neuralgic, that his mother was a victim of oft-recurring nervous headaches, that his aunt has hysteria, and his cousin possibly epilepsy; and that, of his brothers and sisters, some have headaches or neuralgia, and others are such as are called nervous people.

Not long since I saw a boy of sixteen, who for ten years has been subject to epileptic fits. His mother, who was for many years subject to similar fits, died in early womanhood; her father, who is still living, has during the last few years been epileptic; and, by an interesting coincidence, on the day that I first saw the boy I also met a cousin of the mother, a resident of a distant town, who was himself a sufferer from this terrible malady, and whose mind had already become enfeebled by the disease.

Here is another instance, and one which, with slight variations, may be met with almost daily in the practice of many physicians. A gentleman from a neighboring city has always suffered from a general nervous irritability; he has been one of the class of excessively nervous people; his grandfather had always a great deal of neuralgia; but his father, who observed very strict habits of life, and whose occupation kept him much in the open air, had no nervous trouble. Three brothers have suffered terribly from neuralgia, and one, who for many years was subject to functional nerve-troubles, has now an organic disease of the nervous centres. He has one sister, who is subject to oft-repeated nervous headaches.

Great attention has been paid to this predisposing tendency, both hereditary and spontaneous, by many of the most learned members of the medical profession; but, unless the hypothesis which I present to-night explains this peculiar and unfortunate tendency which forms the unwelcome inheritance of so many families, nothing has ever been known of it except its existence.

There is a peculiarity about this predisposing tendency which should be noted in passing—that persons affected with one form of functional nervous disturbance at one period of life, are liable to suffer from some other form at a later period. Thus, one who in childhood suffers from chorea (St. Vitus's dance), will generally, in later life, be the subject of severe recurring headaches, of neuralgia, or perhaps of epilepsy. It is a commonly-observed fact with physicians that hysterical girls usually become nervous women, subject to periodical headaches.

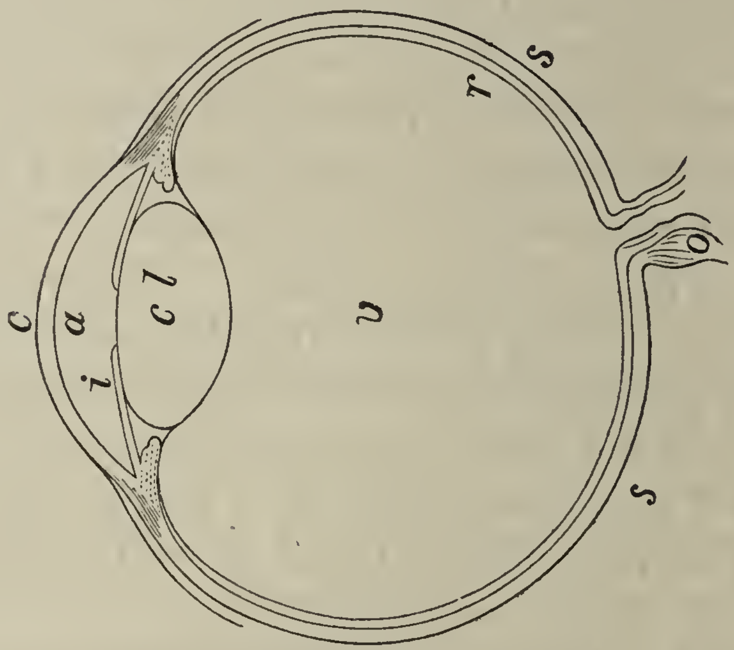
From such facts as these we may logically conclude that the predisposing cause of this class of troubles is a permanent one, that it often descends from parent to child, and that it is usually the same in different persons, and for different forms of functional nervous diseases.

About five years ago my attention was drawn to a singular and what seemed a constant relation between chorea, or St. Vitus's dance, one of the most characteristic and clearly-defined forms of nervous affections, and certain peculiarities in the manner in which light entered the eyes of the patients; and I was struck with the remarkable fact that intractable cases of chorea yielded when the conditions for correcting the eye-troubles were complied with. These circumstances would have led me to suppose that both the chorea and the visual defect were the result of a common cause, and that the remedy for one happened to be the remedy for the other; but, as the eye-troubles were not diseases, but simply natural peculiarities, which caused these patients to see at a disadvantage, that these conditions were congenital, and in many instances simply family features, as characteristic as the form of the nose or the shape of the head, it became evident that, if any relationship existed between the eye-feature and the nervous disturbance, it must be the relation of cause and effect, and that the permanent and inherited feature must be the cause. Further investigation revealed the fact that in other forms of nervous troubles similar relations were formed. As those in whom I had discovered these relations were in almost every instance patients on account of a particular class of affections, I thought it best to search among the patients of those who were engaged in more general practice. Accordingly, the kind offices of many of my medical friends were brought into requisition to furnish the material, from general practice, for this investigation; but the results were the same as before. Hence I was led to conclude that, as a general rule, certain forms of visual defect and functional nervous diseases were in relation to each other as cause and effect.

Before proceeding further let us briefly review some points in the physiology of vision. When rays of light fall upon the surface of a healthy eye, they pass through the transparent portions, to reach the retina, which is the extremely delicate membrane constituting the inner lining of the posterior part of the eye, and is the sensitive surface on which the image is formed. But, in passing through these transparent portions, to reach the retina, the rays of light are bent, or, in technical terms, are refracted, so that they may be brought to a focus. In this diagram is represented the form of a section of an eye, showing the arrangement of the parts for refracting the rays of light.

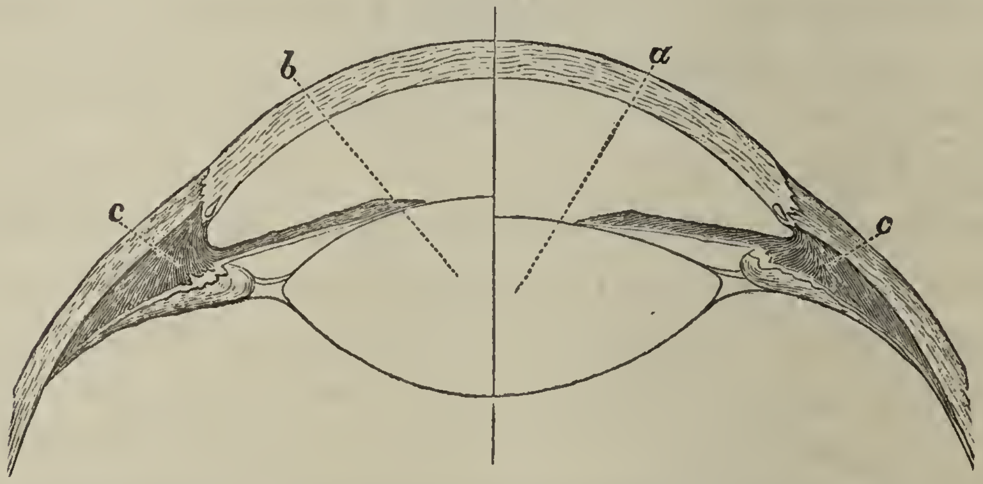
The tough opaque shell of the eye, *s* (*sclera*), maintains its form, and holds in place the transparent humors which fill up its space. In front, this shell is changed to a transparent window, *c*, the cornea. Light from a luminous object passes through this transparent substance, and then through a body called the crystalline lens (*c. l.*), reaching at length the retina *r*. In order to form an image here these rays are refracted so as to bring them to a focus upon the retina; but, as objects are seen at different distances, some provision must be made for changing the focus of the eye. This you know is done in the opera-glass by turning the screw, so as to throw the lens forward for near objects, and backward for distant ones. In the eye this change of focus is effected by the crystalline lens.

Fig. 1.



This lens is hung in its place by a delicate substance, which attaches it to an annular ring of muscular fibres, called the ciliary muscle (*c*, Fig. 2). When this ring of muscle contracts, the lens, by its elasticity, becomes thicker and more convex, and thus the rays passing through it are more strongly refracted, and near objects are distinctly seen.

Fig. 2.



(Fig. 2 shows the condition of the lens under these different circumstances. At *a* the ciliary muscle, *c*, is in repose, the lens is flattened, and the eye accommodated for distant objects. At *b* the ciliary muscle, *c*, is in a state of contraction, the lens is thickened, and is accommodated for the near point.)

This faculty of changing the focus is called the faculty of accommodation, and is in constant use as we turn our eyes from near to distant objects. In an eye constructed on as strict optical principles as eyes should be, this change is very easily produced, and vision is perfect at all points with only the slight exertion of nerve and muscle force which can be maintained without fatigue or consciousness of exertion. In such an eye—which, because it is the best form of an eye, we will call a normal eye—the slight tension of the ciliary muscle which is necessary for near vision may be kept up for many hours with very little if any inconvenience. But we know that a constant tension upon a muscle or set of muscles, if it be even but a little more than Nature intended, soon produces fatigue. A pound-weight is but little for any one to hold; but let any person hold a pound weight in the palm of his hand while he bends the elbow so that the forearm is at right angles with the arm, and in a short time, varying from one to several minutes according to the muscular power of the arm, fatigue will be experienced;[1] and, if the experimenter is not accustomed to much exercise of the muscles of the arm, a rather painful sense of exhaustion may continue for a considerable time.

Now, it not unfrequently happens that such a constant and unnatural tension is forced upon this ciliary muscle which regulates the accommodation. For all eyes are not constructed upon the most perfect plan: some are too long, some too short, and some have not uniform refractive surfaces in different meridians.

The diagram here shown will assist in understanding this. In the figure at *A* we see rays from a distance, parallel rays, refracted in such a manner as to be brought to a focus at the retina. This is the normal eye. At *B* the rays at the same distance from the cornea have not reached the retina, but cross over and are separated before reaching it, so that a clear image of distant objects is not formed. This is the near-sighted eye, and is technically called a myopic eye. It is too long. At *C* we have the reverse of this condition. Here the eye is too short, and the diagram shows that the rays when they reach the retina are not yet brought to a focus, but could they pass through would unite in a focus behind the eye.

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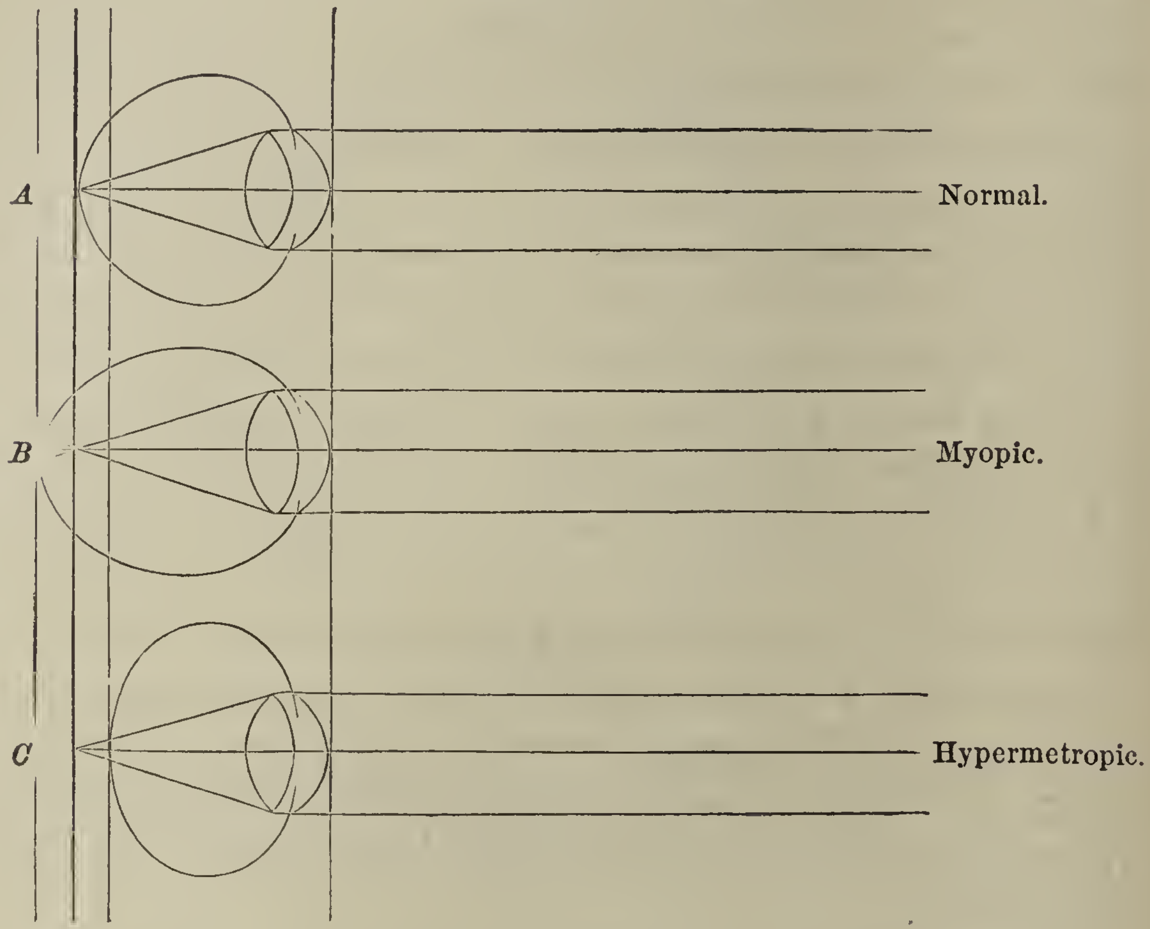
[1] Donders on Asthenopia.

This is the eye commonly called oversighted—technically, hypermetropic.

FIG. 3.



The oversighted person, in order to see even distant objects clearly, must begin to exert the faculty of accommodation. By contracting the ciliary muscle, such a person is enabled to see a distant object with either perfect or comparative distinctness. The force, if the eye is not much shortened, may not be more than the person with the normal eye exerts when he looks at a near point; but we see that, as the hypermetropic person brings the object near his eye, he must exert much more than the natural force in order to bring the rays to a proper focus. As this muscle is forced to contract by nervous influence, it will be seen that here is a source of nervous exhaustion, especially if the muscle is forced to a continued contraction, as is the case when such a person reads or works at needle-work for a considerable time.

Thus it will be seen that, while normal eyes are always at rest when accommodated for distance, and only slightly exerted when accommodated for the near point, hypermetropic eyes are never at rest except when closed; and that, in view-ing near objects, an excessive effort is required, and that this excessive effort is increased in proportion as the hypermetropia is more considerable.

Nor is this the only disadvantage to which the hypermetropic eye is subjected:

As the object viewed approaches, the eyes converge. This may be easily seen by any one who will watch the eyes of another before whom he moves some small object backward and forward, while the person observed fixes his eyes upon it. This act of convergence is accomplished by a long muscle which lies at the nasal side of the eyeball, and which, by contracting, draws the eye toward the nose.

It will be seen that the effort of accommodation effected by the ciliary muscle within the eye, and the effort at convergence effected by the long straight muscle without the eye, are simultaneous; but they are also exactly proportioned to each other, so that a pair of normal eyes accommodated for twelve inches is also converged for twelve inches. In a pair of hypermetropic eyes, however, this balance is lost, and a person having such eyes who accommodates for twelve inches requires an exertion on the part of the ciliary muscle equal to accommodating the normal eye for a nearer point—we will say, for six inches. In such a case, a corresponding convergence of the eyes will take place; and so, while the eyes are accommodated for twelve inches, they are converged for six. Confusion of nervous and muscular action is the result; there is disappointment of all the parts involved in the action, and in all affairs of muscles, of nerves, or of the heart, nothing is so depressing or distressing as disappointment.

To this confusion of nerve and muscle are due the pain, nausea, and vertigo, of the youth who attempts to read with his grandfather's spectacles, and this is the constant state of confusion of nerve and muscle in cases of erroneous refraction of the eyes. Let any one who imagines this nervous confusion to be of slight importance, if he have normal eyes, and has not reached the age when strong convex glasses are demanded, attempt to read for half an hour with magnifying spectacles of sixteen or eighteen inches' focal length, or let him study the landscape for a considerable time with a pair of glasses adapted to a near-sighted person, and he will soon, by his aching eyes, his nausea and vertigo, acknowledge that here is a cause of nervous disturbance of no slight or insignificant pretensions; and when we remember that the immediate cause of convulsions and other alarming nervous disturbances is sometimes apparently trivial—such as a hastily-devoured meal or the taking of even a small amount of food which is illy digested—we cannot fail to perceive that this cause of irritation, prolonged through all the experience of the individual, must be abundantly potent to produce either of the functional disturbances of which we have spoken.

A form of error of refraction not yet referred to is a combination of other forms, and is called astigmatism, which means *without a point.* In this anomalous condition the refracting surfaces are different in different meridians of the eye, so that no exact focus can be formed, and there is an irrepressible conflict going on to correct the error, which can never be corrected without external help. This is a most vexatious cause of irritation and prolific source of nervous disturbances.

We are now, I think, prepared to bring our two classes of facts together and see if they will fit.

We have seen, in the early part of this discussion, that the tendency to nervous affections often runs in families, and that the nervous disturbances manifest themselves in different forms in different members of such families; that, in these families, what is sometimes called a " neuropathic predisposition " exists.

Now, it is also true that the faults of refraction are the unfortunate heritages of many families. Indeed, these refractive conditions are as much characteristic features, depending as they do on the form of the eye, as the form of the nose, the eyebrow, or the cheek-bones; and, as we see family likenesses prevailing among those who are related by ties of consanguinity, so these peculiarities in refraction are family inheritances.

Surely, it would be a most interesting and important fact were we to find that these nervous predispositions and these refractive evils were to be found in the same families, and yet this is precisely what I have proved in a large number of instances.

Let me give you one or two examples: A lady, who has for years been the subject of severe headaches, coming on almost every week, and continuing from one to three days, has one brother and two sisters living; a third sister died a few years since. The brother has from boyhood suffered from headaches; her elder sister was for years subject to convulsions, which deprived her of consciousness for a time, varying from a few minutes to half an hour, and which occurred about once in three or four weeks; these were possibly epileptic fits. The other living sister has always been subject to neuralgia and nervous headaches, and the sister who died was, like the last, a victim of neuralgia and headache. The eyes, both of the lady first mentioned and of the sister who had convulsions, were found, on testing, to be hypermetropic in a high degree, and from them it was learned that both of the other sisters and the brother were forced to put on old people's glasses before they were twenty-five years old, rendering it almost absolutely certain that they were all hypermetropic, and that this peculiar form of anomalous refraction was a family characteristic.

A medical friend complained of his oft-recurring nervous headaches, which he said he inherited from his father. He was induced to have the refraction of his eyes tested, when it was found that he had astigmatism. An elder sister who, during several years of her early life, was a victim of chorea, but of late a sufferer from intense neuralgia, and from that distressing form of headache called hemicrania, was found to have astigmatism in a high degree; and her only son, a boy sixteen years of age—who is, like his grandfather and uncle, a subject of headaches, recurring so frequently as to interfere with his education—is, like his mother and uncle, astigmatic. I might mention some scores of family histories, of which these are fair examples.

We are all aware of the fact of this inherited tendency to disease, and yet no person in his senses supposes that a disease like epilepsy or neuralgia is directly transmitted from one generation to another; and this subject of hereditary tendency has always been one of the great mysteries of medical science. But facial features are directly transmitted from parent to child; and, if the form of the eye can constitute an important cause of a class of diseases, the hereditary tendency to these diseases, if it exists, is readily explained.

It would be of little service to a person suffering from a nervous affection to assure him that he had an astigmatism or an hypermetropia, or that he was unequally myopic in the two eyes, unless science offered a relief to these unpleasant peculiarities. Fortunately, modern science is fully prepared to afford the relief demanded.

During the last few years, under the leadership of men of the highest genius, like Prof. Donders, of Utrecht, a class of medical men has brought the science of correcting anomalous refractions of the eye to a perfection which is truly wonderful. Formerly, when a person reached the age of forty-five or fifty, and found that he was, in the language of a medical friend, "forced to trombone his newspaper" in order to find the least uncomfortable distance at which to hold it, sought the nearest jeweler, bought a pair of spectacles which seemed nearest right, but which were often the most completely wrong, concluded that he was growing old, and losing his powers, and so, with as good grace as possible, submitted to the great cross and humiliation of his lifetime.

Now, however, we know that more than one-fifth of all the children in our schools have anomalous refractions, and that the wearing of glasses for the correction of these errors is neither an indication of age nor of foppery, but a sensible acceptance of the great benefits which science confers in such cases. No longer do those who are well informed in respect to such troubles seek a shop where glasses are kept on sale; for one might about as well, if he desired his photograph taken, request his neighbor to sit for him, or search through the show-cases of the photographer for a good picture of himself! He must sit for his own photograph, and he must sit for his own glasses, and often the highest scientific knowledge of the surgeon and the most consummate skill of the artisan are brought into requisition for the correction of a refractive error, of the very existence of which the patient is scarcely aware. Hitherto, this knowledge of the surgeon and skill of the worker in glass have been almost exclusively of service when the patient complained of visual troubles. Henceforth, I am convinced that these visual troubles will be sought for in order to afford relief for and protection against many nervous affections.

It is said that "the proof of a pudding is in eating it," and the crucial test of a doctrine such as I have presented is its applicability in the management of the affections of which we have spoken. Does the correction of the eyes of patients relieve their nervous symptoms? I answer unhesitatingly, yes. This is no place to relate cures in medical practice, but, after a sufficiently extended and careful series of observations continued during more than four years, I can safely prophesy that this principle will be found of more universal application and more successful in its workings than any which has been advanced for the mitigation of this class of affections.

Many hundreds of persons suffer the strain upon the eye and upon the nervous system, as the result of these visual troubles, who are entirely unconscious of any defect of sight.

A robust-appearing German friend, who had adopted glasses for the correction of refractive errors on account of a nervous difficulty, when asked to describe the effect of his glasses upon him, replied: "When one who has a tight coat that he has worn so long he don't know it is tight, because he is used to it, gets another coat which is big enough, then he knows how he feels so much better. That is the way with my glasses. I did not know how bad I feel before, until I got my glasses and felt so much better."

How often do we see children of our schools, frequently the brightest and most ambitious of their class, struggling with irritable nerves, at a disadvantage in their studies, laying the seeds of future trouble, and often, as the time comes for selecting a pursuit in life, forced to abandon a chosen course of studies, because the confinement at such work is too great a strain upon them! I look forward to the time when these children who, from this single peculiarity, are placed at so serious a disadvantage in the struggle for life, shall find the relief that science is ready to afford them, and which would remove the weight that would otherwise prove a serious hinderance in their course.

We may compare the heart of a man to the main-spring of a watch, while the delicate nerves which control the accommodation of the eye may be compared to the fine hair-spring of the time-keeper. It matters little how often we wind the watch, and thus supply tension to the main-spring, if the delicate hair-spring is not well fixed in its place—if it is a little too long or a little too short—our watch is out of time, and cannot be made to run true; but, regulate the tension of this extremely delicate spring, and the movements of the watch become perfect and reliable.

So the heart may supply the force neccessary for the perfect working of the human machine; but if the tension upon these delicate nerves is not well regulated, there may be such nervous disturbances as seriously to impair the comfort and usefulness of the individual.

There may be a broken cog or an imperfect wheel in the time-keeper, which, in spite of main-spring or regulator, will sooner or later stop the watch; and, in the human machine, there may be gross organic lesions which will disturb or destroy its workings; but, excepting these, and other things being equal, the boy or the girl with the best heart and the best eye is most completely armed for the battle of life.

Art. IV.—*On a New and Simple Method for the Quantitative Estimation of Urea.*[1] By George B. Fowler, M. D., Instructor in Physiology, College of Physicians and Surgeons, etc., New York.

Urea, being one of the most interesting and important constituents of the animal body, has occupied the attention of chemists and physiologists since its discovery in 1773, by Rouelle, Jr. Its properties becoming known, and its significance as a decomposition product appreciated, a certain stimulus has ever since attached to its study; and, as a result, various methods for its estimation have been devised, based, of course, upon its properties and chemical relations.

Other characters of urea than those directly connected with the most reliable quantitative methods, do not at present concern us; and a hasty survey of these, with a special view to judge of their simplicity, will not be out of place.

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[1] Prize essay of the Alumni Association, College of Physicians and Surgeons, New York, 1877.

Mitscherlich[1] and Lacanu[2] availed themselves of the striking reaction manifested by urea when treated with nitric acid, and estimated the quantity from the very stable and copious precipitate of *urea nitrate*. But with this method considerable time and chemical manipulation are necessary in order to insure accuracy.

When urea is treated with strong *sulphuric acid*, and heated, it is decomposed into ammonia and carbonic acid. Ragsky[3] proposed to estimate the amount of urea originally present by the ammonia thus formed. But, in order to do so, a complicated and delicate process must be gone through with.

Urea, heated with water in sealed tubes to about 100° C., is resolved into ammonium carbonate by the appropriation of two equivalents of water, thus:

$$CH_4N_2O+2H_2O=2(NH_4)CO_3.$$

This product treated with barium hydrate gives us barium carbonate, from which a quantitative estimation of the urea can be made. This is the basis of Bunsen's[4] method.

Nitrous acid decomposes urea into water, carbonic acid, and nitrogen, as follows:

$$CH_4N_2O+2NO_2H=CO_2+2N_2+3H_2O.$$

This reaction constitutes the basis of Millon's method, whereby he estimates the quantity of urea in a given solution by the weight of the gases given off. A modification of this process has been devised by Boymond,[5] in which he employs a rather complicated flask, provided with separate divisions for each of the substances used in the analysis, viz., one for the urine, another for the reagent, and a third for the sulphuric acid, through which the gases are made to pass to rid them of moisture. Each apartment being supplied with the three fluids, the urine and nitrous acid are allowed to come in contact, and decomposition to continue until gas ceases to be evolved. Then the difference between the weight of the flask and its contents, before and after the reaction, will give the weight of nitrogen and carbonic acid lost; and having found that the relation of the gases to urea, by weight, is as 12 to 10, the subsequent calculation is very simple.

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[1] Poggendorff's "Annalen," Bd. xxxi., S. 303.

[2] *Jour. de Pharm.*, tome xvii., p. 651.

[3] "Ann. de Chem. und Pharm.," Bd. lvi., S. 29.

[4] Ibid., Bd. lxv., S. 29.

[5] "De l'Urée," Paris, 1872.

Dr. H. G. Piffard[1] has still further modified this method, with a view to avoid the expensive apparatus of Boymond, and with exceedingly accurate results.

It will be seen that the foregoing methods involve the skillful use of delicate and expensive scales, and most of them necessitate a degree of technical skill and a supply of apparatus not generally possessed by physicians.

Liebig having discovered that *mercuric nitrate* added to a solution of urea would precipitate a white compound composed of one equivalent of urea with four of mercuric oxide, $U+4H_gO$, thereon based his well-known method for the volumetric analysis of urea, simply by the use of a graduated solution of the reagent.

This perhaps is the most reliable and popular procedure ever proposed, but, like all of those thus far mentioned, offers difficulties in chemical manipulation not readily overcome by a novice.

Urea is resolved into hydrochloric acid, water, carbonic acid, and nitrogen, by *hypochlorous acid*, formulated thus:

$$CH_4N_2O+2ClHO=2HCl+2H_2O+CO_2+N_2.$$

As far back as 1853 Wöhler determined the ammonia in guano by the hypochlorites; and in 1854 Dr. Davy[2] published his celebrated process for estimating urea by measuring the volume of nitrogen set free from it by solutions of the hypochlorites.

Davy's familiar process has been variously modified, first by Knop,[3] who, instead of using hypochlorous, employed *hy-*

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[1] New York Medical Journal, December, 1874.

[2] *Philosophical Magazine* (4), vii., p. 385.

[3] Fresenius's *Zeitschr. für analyt. Chem.*, ix., 2, S. 225.

pobromous acid, which he found would effect the same result, his apparatus consisting of flasks with a complicated series of glass stopcocks.

Hüfner [1] then proposed an improvement on Knop's method, consisting chiefly in the employment of moderate heat to hasten reaction. But by this procedure oxygen is evolved from the hypobromite solution, which has to be subsequently estimated.

Russell and West [2] next came forward with a very much less complicated apparatus, adapted to the use of sodium hypobromite, and the collection and measuring of the nitrogen disengaged by it from urea. This method has deservedly become very popular.

Last of all, Blackley [3] has invented still another form of apparatus for the hypobromite method; but in my hands it has proved very inconvenient and difficult to manage.

As a general objection to the use of a standard solution of hypobromite, it may be said that it is very unstable, and therefore the preparation of a fresh supply becomes necessary at very short intervals. And, on account of the disgusting odor and injurious fumes of the bromine employed, this procedure itself is not one of the most agreeable.

Having experienced the difficulties in the way of technical details which most of these methods involve, it seemed to me that a simple and sufficiently accurate process for clinical purposes for the quantitative analysis of urea had not yet been published. I therefore submit the details of the following:

Every one who has been in the habit of making volumetric analyses of sugar in urine must have had his patience tried by the frequently sudden and unexpected behavior of the test, which necessitated a complete washing out and new beginning; and I know he must have been delighted when Dr. Roberts published the description of his simple plan, which consists in determining the amount of sugar in a solution, merely by *the difference in specific gravity before and*

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[1] *Journal of Chemical Society*, New Series, ix., p. 162.

[2] *Practitioner*, February, 1875, p. 86, and *Journal of Chemical Society*, 1874, p. 749.

[3] *Journal of Chemical Society*, 1876, p. 466.

after fermentation. It occurred to me that *the difference in specific gravity before and after decomposition by the hypochlorites* or *hypobromites should bear a definite relation to the quantity of urea originally present in the solution.* I therefore instituted a series of experiments, of which the following is an account, and which proved my theory to be correct.

Now, between stable and fermenting *saccharine* solutions, there is obviously a wide margin as regards specific gravity; for, by the action of yeast, not only is there a loss of matter, CO_2, but a generation of a liquid lighter than water, alcohol. It was therefore a question at the outset whether we would have sufficient margin, with urine and the proposed reagents, upon which to base a calculation, and whether small differences in the amount of urea would be indicated with sufficient accuracy. Theoretically it seemed that there should be a loss in gravity, after the mutual decomposition between urea and a hypochlorite or hypobromite, as shown in the preceding formula, where, besides the loss of nitrogen, there is a production of water. According to Dr. Davy, the carbonic acid does not escape from the solution, but is reabsorbed by the excess of caustic alkali of the reagent. My own observations support this statement, and therefore this product does not add to our margin.

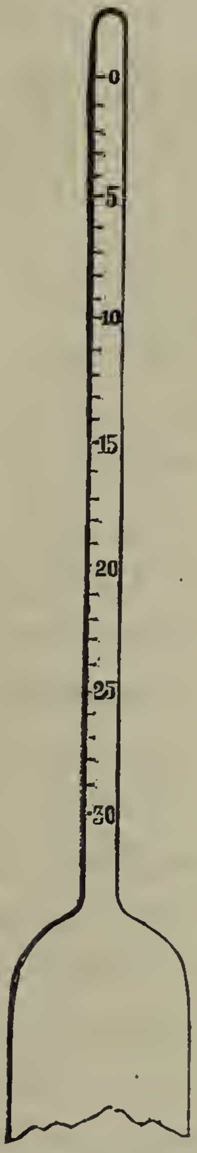
Again, urea consists of $\frac{7}{15}$ by weight of nitrogen. Therefore almost one-half of the urea in the solution will disappear; and this loss, together with the water introduced, should cause a perceptible difference in gravity.

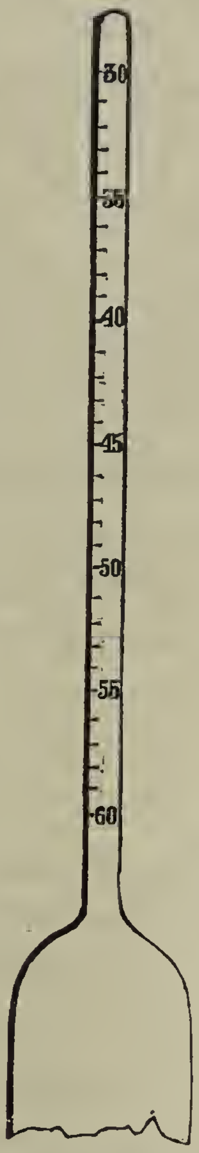
The reagent which I have found to be the most convenient for this analysis is sodium hypochlorite (the *liquor sodæ chlorinatæ* of the pharmacopœias), on account of its cleanliness, and because it is easily procured. But, unfortunately, the preparations of this article vary exceedingly as regards composition and specific gravity, some giving an insoluble precipitate of *lime carbonate* with urine, and having a gravity of from 1050 to 1100. Of course, we must not have a precipitate, and such a density would require an hydrometer of very long stem and large bulb, and would necessitate the use of a larger volume of fluid than would be desirable.

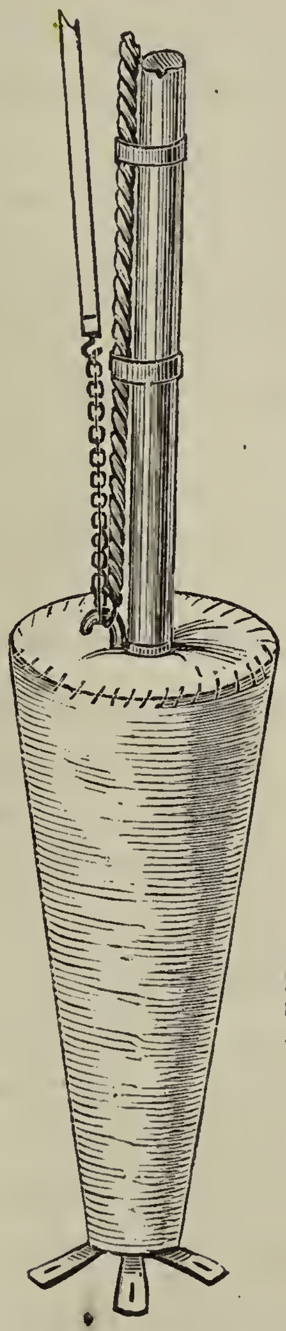
In the standard solution prepared by Dr. E. R. Squibb, of

Brooklyn, however, these objections are overcome, as there is not the slightest opacity following its addition to urine; and he informs me that the density, when it is bottled, is about 1048. By exposure to air and light it is reduced.

The next important step is to procure a suitable hydrometer. The requirements are a stem which will indicate the gravity of the hypochlorite, and also that of the urine, that is, an index ranging from 1000 to 1050, and that each graduation should indicate *one degree*, and be about two millimetres (one-twelfth of an inch) apart, in order to allow of accuracy in the reading. To be able to work with smaller quantities of fluids, the instrument should be divided into two of equal size, one reading from 1000 to 1025, the other from 1025 to 1050.[1]







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[1] Such hydrometers will be made on application to John Tagliabue, 69 Fulton Street, New York.

Dr. Davy found that about six parts of the hypochlorite were required to one of the urine, to decompose the urea ordinarily contained.

This accords with my experience, but, in order to insure complete decomposition, and to provide for an excess of urea, I employ seven parts of the reagent.

My preliminary experiments were performed with solutions of pure urea of known strength, and it was found that after decomposition *every degree of density lost indicates* 7.791 *milligrammes of urea per cubic centimetre of the solution* (3.55 *grains per ounce*). Or every degree lost corresponds to .77 per cent.

I then took different specimens of urine and analyzed them by this method, taking these figures as a basis of calculation, and compared the results with those obtained with the same specimens by Liebig's process.

Table showing comparative results obtained by Liebig's method and that described in this paper (calculated as milligrammes per cubic centimetre):

	LIEBIG'S.	NEW.
1	26.155	26.203
2	32.461	32.500
3	34.983	34.983
4	31.192	31.220

It will be seen that, with one exception, where there is an absolute agreement, the results by the new process are in excess of those by Liebig's by a few thousandths of a milligramme, which is probably due to the decomposition of nitrogenous ingredients other than urea, of which we will presently speak.

In order to use this method, proceed as follows: Procure two glass cylinder jars, one about nine inches in height by one and a half in diameter, the other about seven inches by one inch. Into the smaller pour a quantity of the urine, and ascertain its specific gravity. Take about fifteen cubic centimetres (one-half ounce) of it and pour it into the large jar. Now wash out the smaller jar thoroughly, and in it take the specific gravity of the hypochlorite solution. Then add to the urine in the large cylinder exactly seven times as much hypochlorite as there was urine taken.[1]

When the two fluids mingle there will be a brisk effervescence, and care must be taken that none of the mixture be lost. After several minutes the disengagement of gas is less rapid; and now, by vigorously shaking the jar at short intervals, I have found the process to be hastened, so that at the expiration of an hour the decomposition is complete. It then only remains to take the gravity of the quiescent solution, deduct from what it was before decomposition, and estimate the amount of urea on the basis already given; after this manner:

Suppose the specific gravity of the urine to be 1020, and that of the hypochlorite 1045. But it is impracticable to take the specific gravity of the mixture of these two on account of their immediate reaction; we therefore resort to the law of proportion, and estimate it as follows:

1 part at 1020 = 1020
7 parts at 1045 = 7315
8)8335
$1041\frac{7}{8}$ sp. gr. of mixture.

From the gravity of the eight parts we subtract that which is obtained after decomposition, which, we will say, is $1038\frac{7}{8}$. There is then a loss of 3°. Every degree of loss equals 7.791 milligrammes per cubic centimetre of urine used. Therefore, the urine contained 23.373 milligrammes of urea per cubic centimetre, or 2.3 per cent.

It is, of course, highly important that the temperature of the fluids should all agree when their specific gravity is taken. This may be regulated by the use of a plain thermometer, or by the combination hydrometer and thermometer now so generally employed. But the simplest method is to mix the urine and reagent, and set the mixture aside with the pure urine and hypochlorite in the same locality, when the specific gravity of the three can be taken at a uniform temperature.

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[1] It is not absolutely necessary to employ a special hydrometer except where great accuracy is desired. The instrument ordinarily possessed by physicians, if it is marked up to 1050, does very well for clinical work, a little care and patience enabling one to read the exact specific gravity after a few trials. With this short stem we have a small bulb, and gain the advantage of economy in the use of the fluids. The first thing to do is to procure a couple of jars (or large test-tubes with feet) whose calibre will freely accommodate the hydrometer, and then ascertain, by using water, what will be the smallest quantity of liquid which, in a particular jar, will float the hydrometer. One-eighth of this quantity will be the measure of urine to employ.

The presence of neither albumen nor sugar interferes with the accuracy of this method.

But it may be urged as an objection that other nitrogenous ingredients of the urine, such as uric acid and creatinine, suffer the same decomposition as urea, and therefore constitute elements of error. Yet, when we take into consideration the facts regarding these substances, namely, that, of the nitrogen contained in uric acid, thirty-five per cent., in hippuric acid, eighty-two and a half per cent., and in creatinine twenty-five per cent., *is not disengaged* by solutions of the hypochlorites, and when we remember how insignificant are the quantities of these substances in the urine compared to urea—the excretion per day being respectively about 0.7, 0.35, and one gramme, a total of 2.05 grammes—it is obvious that their presence does not establish a serious fallacy. Ammonia, however, would interfere, and give an erroneous result.

When the urine contains a great excess of urea, more than would be decomposed by seven parts of hypochlorite, it is simply necessary to dilute it with an equal volume of water, use one part of the dilution to seven of the reagent, and multiply the result obtained by two.

It is evident that with this method we must be able to fix the point at which the hydrometer floats in the several liquids with nicety. When these liquids are perfectly transparent there is no difficulty, the proper way being to read from the under surface of the fluid, bringing the eye on a level with that surface. But, when the urine from any cause is opaque, this process is not practicable, and, under these circumstances, I resort to the following simple device:

Take a piece of soft pine, and shape it into a circular disk somewhat smaller than the calibre of the smallest jar to be used. Make it exceedingly thin and uniform, and perforate it in the centre with a round hole which will freely accommodate the stem of the hydrometer. Having put the stem of the instrument through this opening and immersed it in the fluid, the bit of wood will float on the surface, and the specific gravity can be readily taken by noting the point at which the float comes in contact with the stem. The weight of the wood will cause a slight increase in density, but, when used, in every case the error will be the same, and therefore corrects itself.

ART. V.—*A New Method of curing Popliteal Aneurisms.* By MARTIN BURKE, M. D., Third Surgical Division, Bellevue Hospital.

EARLY in the autumn of 1876, while Junior Surgeon of the Third Surgical Division, at Bellevue Hospital, I happened to read an article in the *Medical and Surgical Reporter* upon a new method of curing popliteal aneurisms, by the employment of a conical shot-bag suspended from a height by a rope, the apex of which cone should press upon the femoral artery in Scarpa's space, and so cause all pulsation to cease in the aneurism below. This article was very brief, and the medical gentleman, whose name I have unfortunately forgotten, reported a case as having been cured by this apparatus, without pain and within a very brief period. Shot-bags had been frequently placed upon arteries before, either to diminish pulsation below, or even for the cure of aneurisms, but I had never before seen or read of one having been suspended from a height, so that its apex just rested upon the vessel below. Shortly after this Nathan Corbin, a colored man, aged thirty-nine, was admitted to our wards, suffering from a large but partially solidified popliteal aneurism, in which, however, *bruit* was audible and pulsation forcible. The patient stated that his aneurism had been growing for about two years. Three weeks before his admission he became the patient of a physician who promised to cure him in nineteen days, and, as his pain at that time was agonizing, he readily consented. An ordinary amputating tourniquet applied in Scarpa's space controlled the femoral artery, but, the patient not being able to endure sufficiently firm pressure, pulsation still continued in the aneurism. At the end of nineteen days, although the aneurism was comparatively hard, and notwithstanding that when the tourniquet was removed his pain was mild to what it had been before, he, nevertheless, refused to continue under his physician's treatment, and was accordingly admitted to Bellevue by Dr. Crosby, Visiting Surgeon, September 20, 1876. Dr. Crosby, having consulted with the house-staff, was about to decide upon digital compression, when Dr. Pell, our Senior Surgeon, to whom I had communicated the article in the *Medical and Surgical Reporter* before mentioned, suggested the use of the shot-bag suspended from the ceiling. Dr. Crosby having consented to his plan, one of our division-staff recommended that a hollow rubber tubing should connect the bag and rope, so as to make a perfectly elastic apparatus. The tension of the bag upon the artery was regulated by having a hook attached to the neck of the bag, which could be readily slipped into one of the links of a chain which hung to the end of the rubber tubing. The bag was steadied by a long, thin bamboo rod, which reached down the centre of the bag, when filled with shot, almost to its apex. Thus prepared, the bag was now suspended from the ceiling by a rope and pulley, its apex, an inch in diameter, resting upon the femoral artery near the base of Scarpa's space. We now found that, by raising or lowering the bag by means of the chain, pulsation either increased or diminished respectively in the aneurism. As we did not in the beginning wish to shut off all pulsation, we allowed it to rest slightly upon the artery for twenty-four hours; and then, finding that the patient suffered no pain, we increased the pressure, and caused the popliteal aneurism to cease pulsating.

This pressure was carefully continued for eight days, and then, all pulsation having ceased in the aneurism, the bag was removed. During this period our patient took but two grains of opium; he suffered no pain, and but little inconvenience; and, although the cone was steadily maintained in one position, there was no excoriation of the parts beneath. I have omitted to mention that the patient's leg was well wrapped in cotton. He was discharged October 20th, one month after admission.

Dr. James R. Wood now admitted a private patient, with a popliteal aneurism as large as a goose's-egg, which had been growing for three months. No cure had been attempted. The shot-bag was applied February 22, 1877, and March 10th the aneurism was pronounced cured. During his treatment the patient received about four grains of opium, the shot-bag producing little or no uneasiness. Patient slept heavily, and for the first ten days frequently neglected to keep the bag in place directly over the artery, so that we were compelled to secure it in position by tabs fastened to the apex of the cone, and reaching to about the patient's thigh. This explains the unusual length of time in effecting a cure.

Our next patient was Joseph Temple, who had been in our wards six months before, suffering with a popliteal aneurism of right leg, for which his femoral artery had been ligated. He had been discharged cured. He now returned with another aneurism the size of a hen's-egg in the left popliteal space, Dr. James R. Wood again admitting him to his wards as a private patient. The shot-bag was applied in this case March 18th; and March 24th, six days after, all pulsation had ceased in the aneurism. For security, the apparatus was allowed to remain on some days longer, and then permanently removed. One week later the patient returned to his home. These three cases illustrate most strikingly the ease and security of using such an apparatus as the one I have briefly considered, not only for popliteal aneurisms, but also, with certain modifications, for some cases of secondary hæmorrhage, and for aneurisms of other arteries.

In conclusion, I will describe, in a few words, our entire apparatus as it is now in use. The shot-bag should be made of canvas, in the form of a flattened cone, and its apex should measure about one inch in diameter. Either a rounded piece of cork or of India-rubber, one inch in thickness, should be fitted accurately to the inside of the apex of the cone. A long, thin rod, reaching down to and resting upon the rubber in the bag, should be inserted and held directly in the middle of the cone, while shot is being poured around it, and until the requisite weight is attained, say about twelve pounds. A piece of canvas of the requisite size, with a hole cut in its centre for the passage of the rod, is now tightly stitched over the base of the bag. A stout wire hook being now fastened securely both to the centre of the broad base of the cone, and to the rod as it emerges from that point, to prevent it from slipping from its bed, and tabs having been sewed to the conical point of the bag, it is ready for use. And now to suspend it: A small pulley is driven into the ceiling, through which is passed a rope, both ends of which are to be attached to the wire hook in the shot-bag, with this difference, that one end is passed through rings fastened to the rod, and helps, in a measure, to keep it in place. To the free extremity of the outer end of the rope the rubber tubing is secured, and from a hook in its free end a large linked chain connects it with the hook in the centre of the base of the shot-bag. The chain is merely to regulate the amount of pressure which it may be desirable to employ. Such, then, is this apparatus, which is simplicity itself, and which is at the same time certain in its results and comfortable to the patient in its application. I believe that it is a slight advance, and I trust it may prove a valuable one, in our knowledge of the treatment of aneurisms.

Translations.

Woorara in Tetanus (Extract from a "Contribution to the Knowledge of Tetanus," by Dr. A. E. Knecht, Physician to the Prison at Waldheim. Reported in *Schmidt's Jahrbücher*, vol. clxxiii., p. 94, *et seq.*). Translated by B. A. Watson, M. D., Surgeon to Jersey City Charity and St. Francis's Hospitals, Jersey City, N. J.

Woorara was, as is known, first used in tetanus by Vella, in the Italian War of 1859, and, supported by the current theory of the relation between the muscular action and the temperature in tetanus, had a warm reception, especially in Italy and France.

Our literature contains fifteen cases treated wholly or in part by this drug.

CASE I. *Tetanus Traumaticus; Woorara; Cure.*—The disease occurred in a boy aged sixteen years, a few weeks after a punctured wound in the sole of the right foot, in consequence of fatigue of the same.

In the evening of the third day of the disease .15+ grain of woorara was injected; a few minutes afterward there was so much relaxation of the muscles that the patient could take nourishment. On the fourth day a repetition of the tetanic attack required several injections, of .22+ grain of woorara each.

On the sixth day the dose was increased to .31− grain, which amount was injected four times; besides, the drug was given by the mouth.

On the eighth day it was necessary to increase the dose to .39− grain, as there was yet no improvement.

On the ninth day three injections, each .46+ grain, and three similar doses by the mouth, were given; and the same were repeated on the tenth and eleventh days, without producing the slightest intoxication. On the twelfth day, on account of an especially violent attack at 8 A. M., and afterward at 4 P. M., injections of .46+ grain at each time were given, and in the interval .46+ grain was taken by the mouth. In spite of this, the attacks returned still more violently in the evening, and at 8 P. M. .54 grain was injected. A few minutes after the last injection the patient fell into a condition of general paralysis, with cessation of respiration, bloody foam covering the mouth, and a weak, intermittent pulse. At that time the muscles of respiration would slightly respond to electricity, and after an hour's labor respiration was restored.

During the paralysis the patient had observed everything that was going on around him, and even remembered every word that had been spoken. From this time the improvement rapidly progressed, so that after seven days all signs of tetanus had disappeared. The total amount of woorara given was 18.75 grains, the larger portion subcutaneously.—Bernardo Bianchi: "Annali Univ.," Giugno, 1870; *L'Ippocratico*, 3, ser. xix., 4, p. 100, 1871.

Case II. *Tetanus Traumaticus; Cure.* — The disease commenced in a man aged forty years, six days after a punctured wound in the foot, and increased within ten days to general tetanus. After six days' unsuccessful treatment by venesection and chloral, .46 + grain of woorara was injected, after which improvement followed until the next day. At this time two injections of .46 + grain sufficed to keep the muscles in relaxation.

On the third day six injections were necessary, in consequence of which the patient was so far improved that on the three following days only two injections, and on the seventh none, were necessary. On the eighth day there was a relapse, which required four injections; the same on the ninth day, but from that time improvement continued. Total amount of woorara used was 13.12 grains, and no bad effects were observed from it.—Gatti: *L'Independente*, September, 1872; *Bull. de Thér.*, lxxxiii., p. 472, November 30, 1872.

Case III. *Tetanus Rheumaticus; Cure.*—A man aged forty was admitted for treatment on the thirteenth day of the disease, with trismus, and stiffness of the muscles of the neck and abdomen. He received four injections of woorara from .008 grain to .07 grain, without effect; after this the treatment was changed to chloral for four days, but, as no effect was produced by the chloral on the fifth day, the use of woorara was resumed, and three injections of .07 grain to .09+ grain given. The injections were continued on the three following days, and the dose increased to .18 + grain, when a remission of the trismus was perceptible, while the stiffness of the muscles of the abdomen continued.

For the six days following, the treatment was shifted to chloral, which, even before evening, had reached to a dose of .31— grain. Under the use of this drug the improvement continued.

Case IV. *Tetanus Traumaticus; Death.* — Man, aged twenty-four, having comminuted fracture in lower portion of femur, associated with gangrene, which, after fourteen days, necessitated amputation through the upper portion of the bone.

Tetanus immediately followed the amputation, and was treated during the first four days with injections of morphine and chloral.

On the evening of the fifth day two doses, —.46+ grain each, of woorara were injected, at an interval of three hours.

There was no muscular relaxation, but considerable restlessness.

The same observation was made on the following days, during which time the injections were increased to .92— grain, while large doses of chloral were necessary to control the restlessness.

Death occurred on the eighth day. During the entire course of the disease the temperature was very high. — G. Otto: *Dorpat med. Ztschr.*, iii., 2, p. 188, 1872.

Case V. *Tetanus Rheumaticus; Recovery.*—Boy, aged eleven. The disease occurred after a thorough drenching and chilling. The treatment began on the fifth day of the illness, with injections of .15+ grain to .46+ grain woorara, and was continued nine days, when recovery commenced. Each injection was followed by an intermission of the contraction and a certain composure, which increased in duration from day to day. Total amount of woorara used was 7.02+ grains.—Giuseppe Stoppani: *Gazz. Lomb.*, xxxiii., 47, 1873.

Case VI. *Tetanus Traumaticus; Recovery.*—The case is reported incidentally by Pierantoni, and is mentioned elsewhere.

Case VII. *Tetanus Traumaticus; Recovery.* — Soldier, aged twenty-three. Disease commenced five days after the receipt of a gunshot injury of the head, and after five days began to improve, but it was four weeks before the trouble had disappeared. No fuller account of the therapeutics.

Case VIII. *Tetanus Traumaticus; Death.*—Man aged forty, whose thigh was amputated through the upper portion, eight days after receiving a comminuted fracture of the lower portion. Ten days later tetanus appeared, which, with the addition of pyæmia, proved fatal on the ninth day.[1]

Case IX. *Tetanus Traumaticus; Cure.* — Peasantess, aged forty-two, was bitten by a dog in the lower portion of the right thigh. The wound was excised and disinfected.

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[1] Nos. VII. and VIII. are reported by Heineke.

When the wound was nearly cicatrized, on the twelfth day, the patient began to work.

During the following night she suffered with violent pain in the injured leg, and swelling of the same as far as the knee.

On the fifteenth day the author found the patient with general tetanus developed; bad appearance of the wound, and in a bad condition generally. During the next two days the condition of the patient was improved by injections of morphine, and small doses of chloral; but on the third day the patient was very bad, and the author decided to use woorara.

There were given on this and the two days following always two injections, .15 + grain each, of woorara, whereon improvement began, and continued until recovery, on the ninth day of the disease.—Carlo Sauni: *Il Raccoglitore Med.*, 4, ser. ii., p. 399, November, 1873.

Case X. *Tetanus Traumaticus; Cure.*—A youth, aged sixteen, wounded his left thumb, and afterward slept many nights in the open air on the damp ground. On the seventeenth day tetanus appeared. Besides a warm bath and subsequent inunction, he received internally 62 grains chloral, and also an injection of .31+ grain woorara.

There was improvement on the following day; two injections, each .31+ grain, of woorara, and likewise the already mentioned remedy, were given. The same on the third day. The patient felt relief immediately after each injection. On the fourth day the dose was raised to .46+ grain, and the same number of injections given. On the fifth day the dose was reduced to .31+ grain, and these doses were given for the three following days. On the tenth, eleventh, and twelfth days there was only. 31+ grain injected at one time, and from this time the therapeutics were abandoned, as only a trifling stiffness remained in the legs. The cure was completed soon afterward.—Ant. Ghio: *Gazz. Lomb.*, xxxiv., 30, 1874.

Case XI. *Tetanus Traumaticus; Death.*—Peasantess, aged sixteen, injured her right foot. This injury was complicated by tetanus on the tenth day. Injections of woorara were given, and at first seemed to have some beneficial effect; nevertheless, death occurred on the sixteenth day of the disease.

Case XII. *Tetanus Traumaticus; Cure.*—Tetanus fol lowed a chill, in a lithographer, aged twenty, five days after a laceration of the hand.

The therapeutics consisted in injections of woorara, of which 14.66 grains, in sixty-four injections, were given within sixteen days. The smallest amount given at one dose was .77+ grain, and the largest, 2.32− grains, of woorara, in 1.18 drachm of water.

The smallest number of daily injections was one, and the largest seven (the former being on the last day of the disease). Recovery in twenty-three days.

Case XIII. *Tetanus Traumaticus; Death.*—Man, aged twenty-three, was admitted with an idiopathic paronychia of the hand. Three days after the part had become gangrenous, tetanus developed. Injections of woorara were given as above; still, epileptic attacks occurred immediately after the injections, or in the course of an hour, from which the patient died on the second day.

Case XIV. *Tetanus Traumaticus; Death.*—Peasant, aged forty-seven, in whom the disease commenced eleven days after a contusion and injury of the left foot. Here, also, epileptic attacks followed upon the injection of woorara, from which the patient died on the following day.

Case XV. *Tetanus Traumaticus; Death.*—Tetanus commenced in a peasant, aged thirty, on the eighth day after receiving a contused wound of the left foot. Death followed in a tetanic attack, in spite of twelve injections of woorara.[1]

Thus there recovered two cases of rheumatic tetanus, and seven out of thirteen cases of traumatic tetanus.

Notes of Hospital Practice.

BELLEVUE HOSPITAL, NEW YORK.

Strangulated Congenital Hernia.—A case of strangulated congenital hernia was recently admitted to hospital, and was of special interest, not only for its rarity but also for the long period of time which the gut had been strangulated. The history was as follows: A man aged thirty-seven suffered from congenital oblique hernia, but was only conscious of the fact that he had a hernia for the past five years. There was no testicle on the side on which there was no hernia, and on the affected side the testicle came down and receded at intervals. Nine days before admission to hospital, while unloading the cargo of a steamer, he fell, and felt something give way in his scrotum. He then tried to replace the hernia, but failed. He was seen immediately by a surgeon on board the vessel, who endeavored to effect the taxis with the aid of chloroform. This was unsuccessful, and it would seem that the patient was dismissed without further treatment. Vomiting appeared soon after the accident, and continued for four or five days, when it ceased. At one time it was stercoraceous. He was admitted to hospital nine days after the injury, and said in all that time he had no passage from his bowels. Enemas had been administered, but without any effect. When the vomiting ceased he was able to take gruel, but no solid nourishment. There was a persistent belching of gas on admission. The facies was fair, and did not indicate any severe disturbance. Temperature 99°, pulse 92, and full. There were no signs of peritonitis, but in the inguinal region; over the hernia, slight tenderness was felt. Two and a half hours after admission the patient was etherized, but the attempt to reduce the hernia was unsuccessful. Two hours subsequently, Dr. Martin Burke, the House-Surgeon, operated, and reduced the hernia. The operation consisted in making an incision on the long axis of the hernia, and cutting down on the sac, which contained a large amount of fluid. The knuckle of intestine was congested, but not gangrenous. The testicle was found at the bottom of the sac, and surrounded by the pampiniform plexus. It closely resembled the appendix vermiformis. The stricture was detected at Gimbernat's ligament, and admitted the point of the finger. After division of it the intestine was reduced without difficulty. The operation was completed by closing the tunica vaginalis or sac with silver sutures, so as to embrace in it the testicle, and thus cure the congenital hernia.

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[1] Nos. XI. to XV. are reported by Ambrog. Gherini: *Gazz. Lomb.*, xxxiv., 41, 42, 1874.

After the operation the patient did well, and at present (six days afterward) shows no signs of peritonitis.

Strangulated Femoral Hernia.—A woman, aged forty-nine, suffered for fourteen years from reducible femoral hernia. Two days before admission to hospital, while making slight extra exertion, the hernia came down, and became strangulated. Several attempts were made at reduction by surgeons before admission to hospital, but without avail. The patient vomited occasionally, but no stercoraceous matter. On admission to hospital her condition was good, and there were no signs of peritonitis. An attempt was made at reduction, which was unsuccessful, and it was then decided to operate. Dr. T. D. Mills, the House-Surgeon, made an incision parallel to Poupart's ligament, and reached the sac without any free hæmorrhage. The sac was then opened and the hernia knife carried up to the stricture, which was divided. It was found, however, that after this division the gut could not be reduced; and, on further examination, adhesions were found between the neck of the sac and intestine. These were separated, and the intestine passed into the abdomen without difficulty.

After the operation one-eighth of a grain of morphia was given every hour. At the present time (two days after the operation) the patient is doing well, and complains of slight pain over the wound.

Gunshot-Wound; Suppurative Inflammation of Knee-Joint; Slight Motion.—A boy aged twelve received a pistol-shot wound of the knee, and was shortly afterward taken to hospital. Two days later synovitis appeared, and became purulent. The joint was then freely opened, and kept so as long as the discharge was profuse. When the amount of pus lessened it was found that there existed slight movement. Passive motion was kept up, and at present, though the discharge has not altogether ceased, the boy bids fair to have a useful joint.

MOUNT SINAI HOSPITAL.

Femoral Hernia; Operation; Sac not Opened.—A woman had suffered from a reducible femoral hernia for two years, but four days before admission to hospital complained of pain in the abdomen, with vomiting and constipation, which continued till she entered the hospital ward. The vomiting was at no time stercoraceous. During the time that she suffered from abdominal pain and vomiting the hernia became very much increased in size, and attempts to reduce it while the patient was under the influence of an anæsthetic proved unsuccessful. When she was admitted to hospital an oval tumor was found in the right groin, the long axis being parallel to Poupart's ligament. The tumor measured four inches in one diameter by an inch and a half in the other. It was tense and smooth. There was slight tympanites, but no signs of general peritonitis. After failing to reduce, it was decided to operate. An incision two inches in length was made over the long axis, and carried down to the sac. Three small arteries were ligated. When the sac was reached it was not opened, but, after considerable manipulation, several adhesions between the gut and sac were broken up, and the hernia was without difficulty reduced. The patient has done well since the operation.

The three cases recorded above are of considerable interest: the first, from the length of time that strangulation continued, and from the fact that it was a congenital hernia; the second, because of the adhesions other than the stricture, causing difficulty in reduction; and the third, for the reason that the hernia was reduced without opening the sac, or causing an additional risk of peritonitis—though it is true that such a procedure incurred the danger of reduction *en masse*.

Traumatic Pericarditis.—A boy, aged twelve years, received an injury to the chest, which resulted in pericarditis and pleuro-pneumonia. While walking up-hill and carrying a bundle of sticks, he slipped and fell, the bundle falling on his chest. Six hours afterward he was admitted to hospital, suffering from dyspnœa and pain over the epigastrium. There was no contusion or fracture of the ribs. On examination of the chest a pericardial friction-sound was heard. Next day this sound was absent, and replaced by distant heart-sounds. While the pericardial friction-sound was absent at the apex, it was still heard at the upper part of the sternum. On the third day a pleuritic friction-sound was distinguished on the left side of the chest, and at the same time there was a return of the pericardial friction-sound. At the end of a week the temperature advanced from 102° to 105°, and the left lung gave the physical signs of pneumonia. The course of the disease was much similar to what is usually seen, and at the end of three weeks, or two weeks from the outset of the pneumonia, the crisis has been passed, and the patient is doing well. The whole case is of interest, inasmuch as he came under observation six hours after the injury was received, and was closely watched while the inflammation extended from the pericardium to the pleura, and from the pleura to the lung.

The injury resulted also in synovitis of the knee.

Extirpation of the Uterus.—Dr. Noeggerath performed the operation of extirpation of the uterus at this hospital on May 11th. The patient suffered from cancer of the fundus. The operation consisted in cutting through the vagina anterior to the cervix, and separating the uterus from the bladder. The galvanic knife was then used to divide the vagina posteriorly. A large gum-elastic catheter, armed with a ligature, was then carried up along the anterior and down the posterior surface of the uterus, entering in front of the cervix and emerging behind it. To this was attached the chain of the *écraseur*, which was tightened, and gradually one side of the uterus was freed from its attachment. A similar procedure resulted in separating the attachments on the other side, and then the uterus readily slipped out of the vagina. On examining the uterus the cervix was found to be perfectly normal. In the fundus, however, a cancerous mass was found, which extended down to the os internum. During the operation only a slight amount of blood was lost. This was due, in great part, to the fact that after incisions were made through the vagina a steel dilator was used, so as to enlarge the openings sufficiently to admit of the ligature and chain of the *écraseur* being carried around the fundus.

Proceedings of Societies.

PATHOLOGICAL SECTION OF THE KINGS COUNTY MEDICAL SOCIETY.

November 23, 1876.

The President, Dr. GIBERSON, in the Chair.

DR. AYERS presented an amputated arm, with the following history:

Master R., aged eleven, is said to have injured his arm by wrestling in June, 1876, and fell, hurting the elbow of the same arm, some weeks later. He complained of irregular pains, followed by swelling, all the symptoms increasing during August, when iodine was applied locally.

On the 7th of September Dr. Ayers first saw the case, being called in consultation with Prof. Hamilton by Dr. G. K. Smith, the family physician. The whole arm was swelled, and there was a fusiform enlargement of the whole upper arm, its largest diameter, three and a half inches, being opposite the centre of the humerus. The superficial capillaries were engorged, and the arm felt semi-fluctuating, like an encephaloid mass. A tenotomy-knife being passed to the bone was followed by profuse hæmorrhage, controlled by pressure. The disease was considered periostitis, and an attempt was made to save the arm.

On the following day, Esmarch's bandage having been applied, an incision five inches long was made to the bone. The knife passed through a large amount of grumous material, but the bone was not found loose, as expected, and was not removed. Enormous hæmorrhage followed after the removal of the constriction-cord. Carbolic acid having failed as a styptic, the persulphate of iron was successfully used; but after several days extensive gangrene unfortunately occurred wherever the carbolic acid had touched the tissues. Suppuration was slight, but the whole arm rapidly increased in size up to the 21st of September, when it was six inches in diameter at the shoulder.

At this date the boy was emaciated, suffering from sweats and diarrhœa, and doing badly, the tumor looking more and more like malignant disease.

On the 21st the bone was removed, as it appeared to be a source of irritation. After due consideration amputation at the shoulder-joint was decided upon, as offering the best chance of saving life.

The operation was done November 9, 1876, when the old incision was found covered with a diphtheritic membrane, although no general symptoms existed. An apparently healthy stump was left, although its great vascularity required over thirty ligatures. The patient recovered well from the operation, and when the specimen was presented the wound appeared normal.

Dr. Ayers called attention to the fact that one-third of the head of the bone had atrophied from pressure of the long head of the biceps. The Microscopic Committee have found it to be a rapidly proliferating sarcoma, the tissue being packed with delicate spicula of calcification, some being, perhaps, true bone.

Dr. Ayers considered this as probably an abortive attempt at formation of a new bone. In a similar case he should amputate at once.

Dr. CHARLES JEWETT presented specimens of sarcoma of the liver, with the following history:

Mr. D., aged forty, had his left eye enucleated in 1875 by Dr. Mathewson, for phthisis bulbi, in which a small nodule of melano-sarcoma was discovered after enucleation. The patient was never well from that time, and gradually failed, although able to continue his business till three weeks before his death.

Dr. Jewett first saw him one week before his death, when the liver was enormously enlarged, and he was suffering from ascites and œdema of the legs.

His urine was diminished in quantity, dark-brown in color, contained no casts, but responded to the tests for indican. There was evidence of partial solidification at the apices of both lungs. The patient died on the 18th of November, by asthenia.

An autopsy was held on the 19th, with the following result: The liver was estimated to weigh from fifteen to twenty pounds. The surface of the right lobe was studded with nodules of varying size, which pervaded the greater portion of the lobe and part of the left. Certain portions appeared to be waxy on section. Kidneys and spleen normal. Mesenteric glands enlarged, but not sarcomatous. Lungs adherent at apices, and contained malignant deposits. The contents of the left orbit were removed, but no malignant deposit was found.

The characters of the growths are identical, being those of pigmented sarcoma.

Dr. MATHEWSON said he first saw the patient in May, 1875. He had had intra-ocular hæmorrhage, and iridectomy was done to relieve the glaucomatous tension; but phthisis bulbi followed, and enucleation was done the following September. A minute nodule of sarcoma was found at one point, springing from the choroid. Some weeks after the operation a melanotic deposit was observed in the cicatrix, but, to Dr. Mathewson's great surprise, it subsequently disappeared.

Dr. Mathewson spoke of the difference between carcinoma and sarcoma as regards glandular infection and prognosis. He feared an ultimate recurrence in Dr. Ayers's case. He had frequently seen sarcoma follow an injury.

Dr. Ayers related a case where a seamstress pricked a "mother's mark" on her arm in the month of May. A bloody tumor followed, which was removed, but in a month pigmentation occurred in the cicatrix, followed by rapid emaciation, and death in August.

The lungs, liver, uterus, and ovaries were the seats of extensive sarcomatous deposit.

She had been perfectly healthy up to the date of her injury.

N. B. SIZER, M. D., *Secretary.*

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 26, 1877.

Dr. John C. Peters, President.

Mr. Charles Doremus reported on the chemical analysis of the blood of one of the cases of leucocythæmia presented at a former meeting of the Society, and showed the reactions which took place.

The Relation of the Urinary Organs to Puerperal Diseases.—Dr. William M. Chamberlain read a lengthy paper on the above subject, in which he gave his own observations and deductions, as well as those of others, and pointed out that the whole urinary tract might become the seat of inflammatory disease, beginning at the urethra and extending up through the bladder and ureters to the kidney. Several cases were reported. The first one was recorded by Murchison: A grocer's clerk entered hospital in a comatose state, and died. At the autopsy the urinary tract and kidneys were found inflamed, with a marked exudation of pus. The second case was a woman who had convulsions and coma. The autopsy showed nephritis with congestion of the urinary tract. The third case was a patient upon whom an operation was performed for rectocele and cystocele. On the third day difficulty of urination was complained of, and on the seventh day evidences of disease in the kidneys were manifest.

One case that came under Dr. Chamberlain's charge at Charity Hospital developed puerperal fever, and died after seventeen days. The bladder was then in a normal state, but there were pyelitis and nephritis. There was also catarrhal inflammation of the colon. Dr. Chamberlain said that it would seem that the erysipelatous form of inflammation, which was common in puerperal cases, might extend up through the urinary tract to the kidneys, as well as along the vagina and uterus.

Dr. Fordyce Barker, in response to a call from the President, said that he agreed in the main with the views which had been so ably put forward by Dr. Chamberlain. On some points, however, he would wish rather to supplement than to criticise, for he felt in some views which he held that only a minority of the profession stood with him—an increasing minority it was true, but still a minority. First, as regarded puerperal fever, some had sought to find the disease to consist essentially in the local lesions, but he had always held that puerperal fever was a constitutional disease with local manifestations which differed with the types of the disease, and the localities where they occurred. He did not believe that there were any special anatomical characteristics. In one class of epidemics the kidneys and urinary tract would be involved, in another the vagina, uterus, or appendages, would present lesions most commonly noticed; while on other occasions puerperal fever would present no lesions whatever. Many good men declared that there was no puerperal fever, and, although he strongly opposed their views, he did not deem it apropos to discuss the subject then.

In regard to the use of the catheter, he was very much opposed to the proposition laid down by some German authorities, and referred to by Dr. Chamberlain, that it was a dangerous instrument, for he felt that not only was the catheter not too frequently employed, but, on the other hand, it was not resorted to often enough. He referred to the case of a patient whom he had seen in consultation, where the attending physician supposed that he was dealing with a distended uterus from the fact that the patient passed her water, and had an ovoid tumor above the pubis. The introduction of a catheter revealed the fact that the bladder was distended with urine, and although frequent attempts at micturition were made only a small amount was passed on each occasion.

Dr. Barker drew attention to a clinical fact which he had frequently noticed, and that was that a small amount of residuary urine would give rise to much pain and discomfort, which would be readily relieved by the introduction of the catheter. In many cases he had found that the use of the catheter every eight hours was conducive to much relief. A complication which he had found in three cases was perinephritis. The first case occurred in Bellevue Hospital. The disease began like an attack of pelvic cellulitis, and passed on to suppuration.

When that stage was reached, an incision was made in the lumbar region, and the pus evacuated. The patient made a good recovery. The second case was a woman who developed the complication six weeks after parturition. The case was treated in the same way as the previous one, and ended in recovery. The third case passed through the same course, but unfortunately the operation was delayed until the pus passed down along the pelvic fascia to the groin, and although it was then removed the patient sank and died from exhaustion.

In concluding, Dr. Barker strongly advised against allowing too much deference to authorities, unless their views were borne out by the experience of the observer.

Dr. Mary Putnam Jacobi referred to several points in Dr. Chamberlain's paper, and suggested that too much importance should not be allowed to the analysis of blood of pregnant women, inasmuch as the only analysis on record was that made by Andral and Gavarret, at a time when the facilities for doing so were not equal to what they were at present. She criticised also the views advanced in regard to the hydræmia, and the fatty degeneration of the organs supposed to be associated with pregnancy.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 25, 1877.

Dr. E. G. Janeway, President.

Mammary Tumor.—Dr. E. H. M. Sell presented a mammary tumor, removed from a woman aged fifty-seven. The peculiarity of the case was the fact that it was of only seven weeks' duration. There was no history of injury. The axillary glands were not enlarged.

Catarrhal Phthisis and Tuberculosis.—Dr. Beverley Robinson presented several specimens removed from a man who had been a patient in Charity Hospital. He was twenty-two years of age, and entered hospital March 12th, complaining of the ordinary symptoms found in phthisis. He had been a hard drinker, and at the time of admission presented evidences of secondary syphilis. An examination of the chest showed consolidation at the apices of the lungs, with fluid in the pleura. This fluid was aspirated, but the patient sank gradually, and died. The autopsy exhibited ulceration of the vocal cords, with cavities in the lungs. There were also tubercles, not only scattered through the lungs, but in the different viscera. The history of the case would seem to indicate that the tubercular deposit was secondary to catarrhal phthisis of the lungs.

Breakage of Hypodermic Needles in Aspiration.—Dr. Janeway said that, in regard to the aspiration of the pleura, an accident to hypodermic needles occurred, which was interesting, inasmuch as, to his knowledge, a similar occurrence had taken place at Charity and Roosevelt Hospitals. The accident he referred to was as follows: He had requested his house-physician to test the variety of fluid in the pleura of a patient, and while the physician was completing the puncture the patient turned quickly in bed and broke the hypodermic needle. An incision was made with the intention of removing the fragment, but without success. The patient showed no evidence subsequently of any irritation. At Charity Hospital a similar accident occurred, with a similar result. At Roosevelt Hospital an aspirator needle was being introduced, when by the struggles of the patient it was broken. The fragment could not be withdrawn, but was found subsequently at the *post mortem*, the patient having died of Bright's disease.

Calculus of the Cystic Duct.—Dr. Austin Flint presented a calculus which was found lodged in the cystic duct. There was no history of pain, nor was there any jaundice. The gall-bladder was found diminished in size.

Exsection of the Hip-Joint.—Dr. L. A. Sayre presented a specimen of the head of the femur, which he had removed from a patient in Pittsburg, a man nineteen years of age. When twelve years of age he received an injury to the hip-joint, and for some time subsequently was supposed to have rheumatism, but on careful examination morbus coxæ was discovered. Sayre's splint was applied, and after a time the patient was apparently cured. However, after active exercise, the disease returned, but was again treated successfully by the splint. When sixteen years of age, disease of the joint again developed, and advanced rapidly to the third stage. The operation was found to be quite difficult to perform, as the head of the femur was firmly attached to the acetabulum, and could only be removed in pieces. After the operation the patient made a good recovery, although he was much exhausted at that time.

Cancer of the Bladder.—Dr. Erskine Mason presented an interesting specimen of cancer of the bladder, with the following history: A man, aged forty-five, entered Roosevelt Hospital last December. Four months previously he had an attack of chills and fever, and complained of difficulty of passing water, with other symptoms which in some respects resembled those of stone in the bladder. When the finger was passed into the rectum an enlarged mass was found anteriorly. A diagnosis of cancer was made, and at the *post mortem* it was found to be correct. The cancer involved the posterior wall, and projected anteriorly. The rectum was also found to be involved.

Mitral Stenosis.—Dr. A. L. Loomis presented the heart of a man aged twenty-six who had died in the Mount Sinai Hospital of cardiac disease. He had been well until four weeks before admission into hospital, when he complained of pain in the right breast, which extended outward and downward along the arm. Two or three days after this it became worse, and there then occurred orthopnœa and dropsy of the lower extremities. On entering hospital the patient was cyanotic. Respirations 48, pulse 120, temperature 98½°, facies anxious. An examination of the chest showed an increased area of cardiac dullness. There was also a loud presystolic murmur; also a systolic murmur, which was heard at the median line and conveyed to the right. The jugular vessels pulsated. The patient was given digitalis, and in a few days the symptoms were much relieved. The dyspnœa passed away, and the anasarca was very much lessened. After a period of ten days the previous symptoms returned, particularly the cyanosis and dyspnœa, and on April 20th the patient died comatose. At the *post mortem* the left side of the heart was found to be hypertrophied and dilated. The mitral valves were thickened and adherent, causing mitral stenosis. The tricuspid valves were insufficient. The right ventricle was dilated and hypertrophied. The aortic valves were also thickened and adherent. Dr. Loomis said that the case was of much interest, as proving that with a large amount of heart-disease a patient could enjoy relatively good health; for, until one month before death, there had been no symptoms which caused any difficulty, and, to all intents and purposes, the patient was perfectly well. Another point of interest was, that the symptoms came on suddenly, improved very much in a short space of time, and suddenly again relapsed.

Dr. Austin Flint wished to know what was the cause, in Dr. Loomis's opinion, of the sudden attack.

Dr. Loomis said that it was due to the failure of the right side of the heart.

Dr. Janeway said that he had found that anæmia proved to be a very important agent in setting up urgent symptoms in disease of the heart. He had at one time under his observation, in a dispensary-class, two patients suffering from mitral stenosis. Whenever they became anæmic, cardiac symptoms would develop, and would pass away as soon as they regained their usual health.

Rupture of Cerebral Aneurism.—Dr. E. G. Janeway presented the history of a patient who died in Bellevue Hospital from apoplexy. On examining the brain it was found that a small aneurism existed at the base of the brain, and by its rupture caused the apoplectic symptoms.

Stated Meeting, May 9, 1877.

Dr. A. L. Loomis in the Chair.

Secondary Sarcomatous Deposit in the Lungs.—Dr. Satterthwaite presented, on behalf of a candidate, a specimen of sarcoma of the lungs. The patient had an amputation of the thigh performed for osteo-sarcoma of the femur. The operation was successful, but two months after leaving hospital he suffered from cough and dyspnœa, which increased till he died. Oxygen-gas was given, with much benefit.

An examination of the lungs showed them to be filled with nodules, the largest being the size of a goose's-egg. The bronchial glands were not affected. There was also a nodule situated in the frontal bone, which was elevated above the skin to the extent of one-third of an inch. The dura mater beneath was attached to the frontal bone, and below the dura mater were nodules the size of a cherry, which pressed on the convolutions. A long plate was found in the dura mater at the site where it was attached.

Exfoliation of the Patella.—Dr. Gibney presented a small piece of necrosed bone which came away from the patella. The patient was a boy, who had an attack of rheumatism. This resulted in suppurative periarthritis, and destruction of a portion of the patella.

Varicella in which Vesicles were found in the Intestines.—Dr. Partridge presented specimens of the intestines of a child who died of varicella, complicated with broncho-pneumonia. During the disease the patient had diarrhœa. Several excoriations were found on the large intestine, as well as vesicles resembling in character vesicles on the body. Dr. Partridge also presented an ovum of six weeks.

Loss of Bone of the Last Phalanx, without Deformity.—Dr. Post presented a necrosed portion of bone which he had removed from the phalanx of a finger. The case was of interest from the fact that, contrary to what might have been expected, there was no deformity; due to the fact that new bone formed where the sequestrum had been removed.

Dr. Sayre said that, in cases where a periostitis threatened the destruction of the last phalanx, an important point in treatment was to keep the finger extended for a month or two, so that the tissues would not fall back and form a knob on the end of the finger or thumb.

Dr. Crosby referred to the importance of keeping the sequestrum in position, inasmuch as it not only preserved the *contour* of the last joint of the finger, but it also acted by exciting the formation of bone.

Calculus.—Dr. A. B. Crosby presented a calculus which he had removed from a boy fourteen years of age. For a year there had been slight signs of cystitis. The operation of median lithotomy was performed.

Dr. Crosby also presented two other calculi, which he had removed from a child of seven years, by the same operation.

Enucleated Eye.—A man received an injury to the eye, which caused laceration, and, as a result, prolapse of the iris. In the other eye symptoms of sympathetic irritation were being developed, and it was considered judicious to remove the useless eye. The operation performed was the one usually adopted. The conjunctiva was cut through, and the attachment of the muscles to the globe severed. The optic nerve was then cut, and the eye removed.

Tuberculosis of the Brain Simulating Tumor of the Brain.—Dr. A. L. Loomis presented a specimen of tuberculosis of the brain, which was of interest from the fact that the patient gave all the symptoms usually found in tumor of the brain. The history for one year before entering Bellevue Hospital was not complete, but it indicated that the patient complained of constant frontal headache, which was worse during the daytime, and was increased by excitement.

Three months before admission the pain was constant both day and night, and was accompanied by nausea and vomiting. About that time, also, the patient became totally blind, and had difficulty in articulation, though the intellect was clear. When he entered hospital there was inability to either stand or sit, and, placed upright in bed, he would slide down into his usual position. Pulse 118, temperature 98½°. The pupils were dilated, and did not respond to light. Hearing, on the right side, was completely gone. The tongue was flexed to the left side, and there was also facial paralysis on the right side. The grasping power of the right hand was less than of the left. The pain continued in the head, and was worst on motion. The senses of taste and smell were not affected. The diagnosis made was tumor of the brain, or meningitis, or possibly both. On the following day the patient became comatose, the respirations slow, pulse frequent and feeble, pupils contracted, with oscillation of edges. The comatose state continued for twelve hours, when he rallied to his normal condition, in which state he continued, with many relapses, for thirteen days, when he died.

Autopsy.—The dura mater was adherent posteriorly to the skull and to the cerebellum. There were evidences of basilar meningitis, but no tumor. Miliary tubercles were found on the cerebellum, lungs, spleen, and liver. The case was of marked interest as showing the uncertainty of symptoms in forming a reliable guide for the diagnosis of tumors of the brain. The temperature of the patient was never above 99°.

Removal of the Astragalus and part of the External Malleolus for Congenital Talipes Equino-Varus.—Dr. Erskine Mason presented specimens taken from the foot of a case of talipes equino-varus. The history was as follows: A woman aged twenty entered Bellevue Hospital suffering from congenital talipes equino-varus. On admission she was in the service of Dr. Lewis A. Sayre, but was transferred by him to Dr. Mason. She left Bellevue shortly afterward, and entered Roosevelt Hospital on March 29, 1877, and again came under the care of Dr. Mason. The case was one of extreme talipes, in which walking was performed with much pain. Dr. Mason proposed, at first, to remove the cuboid bone, but at the time of the operation, April 2d, he adopted a suggestion of Dr. A. C. Post, and took away the astragalus. On bringing the foot into position the external malleolus was found to present an obstacle, and enough of that was taken away with the bone-pliers to allow of the foot being placed in proper position. The tendons and vessels were pushed aside, and the astragalus was disarticulated without difficulty. The extremity was placed in a plaster-of-Paris dressing, and so kept till April 5th, when it was found that sloughing was occurring on the dorsum of the foot. It was then taken out of the plaster dressing and placed in a fracture-box, but shortly afterward secondary hæmorrhage took place, and the only resource left was to amputate the foot. This was performed, and the patient rallied from the operation, and did well for several days. On May 4th, however, she began to sink, and died on May 8th. Previous to the first operation it was noticed that ecchymotic spots existed on the feet; and, moreover, when pressure was made on any part of the body, ecchymoses would follow. Dr. Mason said that, although the case did so badly, he would feel justified in operating again under the same circumstances.

At the time of the operation he was not aware that the operation had been previously performed, but from a letter received from Dr. Ashurst, of Philadelphia, it appeared that Mr. Laird, of Manchester, England, had reported a case similar to the one presented by Dr. Mason.

Dr. Post said that he noticed, at the time of operation, that quite an amount of force was required to get the foot in position after removal of the astragalus.

Dr. Crosby, being informed that the patient came from the country, said that he thought it would be preferable to operate a few days after removal to the city, or if that was not possible, to wait till the patient became acclimated. Dr. Mason agreed with the suggestion of Dr. Crosby.

Dr. Sayre said that the patient, on her arrival in the city, came first to consult him. He had cut the plantar fascia, and tried to reduce the talipes, but the force exerted produced not the slightest impression. He then advised amputation. He found that the patient was considerably disturbed in her mind from some difficulty she had had with her family in respect to operative procedures for the relief of the talipes. Dr. Sayre thought this, with other things, tended to depress her vital powers.

Suppurative Pericarditis.—Dr. J. Lewis Smith presented the heart and lungs of a child aged four and a half months, who had died in the New York Foundling Asylum, of suppurative pericarditis. The patient had been sick for six days, and on examination of the chest it was supposed that there was double pneumonia, from the presence of bronchial breathing. When first seen, the patient seemed moribund; on the following day she was much better, but subsequently sank and died. At the autopsy there was evidence of pleurisy, but not of pneumonia. The bronchial breathing was caused by consolidation of the pulmonary tissue, due to distention of the pericardium with fluid.

Dr. Smith did not think pericarditis in infants so rare as was supposed, for he had met with three cases.

Dr. Loomis said that he had found bronchial breathing to be caused by the distention of the pericardium with fluid. In regard to the causation of the suppurative pericarditis, he was informed by Dr. Smith that there was no infectious disease prevailing.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 5, 1877.

Dr. S. S. Purple, President.

A New Osteoclast, or Instrument for Causing Fracture at an Elected Point.—Dr. C. F. Taylor read a paper on the above instrument, and narrated a case in which fracture was successfully performed at an elected point.

The instrument consists essentially of two parts: 1, a C-shaped bar of iron, which is fitted over the point at which fracture is desired; and, 2, a lever of wood, by which the desired pressure is brought to bear on the iron.

The iron C is separated from the skin by a hard rubber pad. The wooden lever rests on a pad, which serves as a fulcrum, situated above the site of fracture, and passes beneath the lower concavity of the C. Pressure is exerted at the long end of the lever by means of a screw, of sufficient power to cause strong and rapid force to be brought to bear on the C.

The case referred to was one of morbus coxarius, in which the thigh was abducted and flexed at a right angle to the pelvis by means of firm anchylosis. The elected point was as close to the pelvis as the instrument could be applied; and, after it had been applied with the fulcrum of the lever resting over the trochanter major, the screw at the distal end was suddenly turned, and the bone snapped with a sharp report. When the instrument was removed, no discoloration was observable, nor was there any tenderness on pressure. Care was taken, however, to avoid bringing the femoral artery between the force and the bone.

After the operation the limb was placed in a splint expressly constructed for the patient, and after fifty days a plaster-of-Paris bandage was applied. This was renewed periodically for about two months, and at four months from the time of operation the patient was able to stand erect, with but little shortening of the limb.

Stated Meeting, May 3, 1877.

Dr. S. S. Purple, President.

Report on Phimosis, from the Surgical Section of the Academy.—Dr. Leroy M. Yale read a paper on phimosis as a cause of nervous and cerebral symptoms. The paper was exhaustive, and investigated the normal condition of the prepuce of childhood, which Dr. Yale had found to be that of phimosis.

Dr. Sayre agreed with Dr. Yale. He had recently had a case sent to him by Dr. Knapp, in which there was dropsy of the optic nerve, with irritation of the genitalia, from phimosis. He circumcised the boy, and found that, after three weeks, improvement had so far advanced as to permit the child to read ordinary print. He had another case brought to him in which the patient, a stout lad, acted as if he were delirious. The prepuce was adherent, and after it was removed the boy was able to articulate quite plainly, and remain quiet.

Dr. Otis referred to a patient, well advanced in years, who suffered from senile emissions. On examining the penis he found that the foreskin was long, and kept the head continually moist. Circumcision was performed, and subsequently the patient was cured.

NEW YORK MEDICAL JOURNAL ASSOCIATION.

Stated Meeting, May 4, 1877.

Treatment of Headache.—Dr. Eugene Dupuy read a paper on the treatment of migraine, and reviewed the methods which relieve headache. He referred to the injection of brandy into that side of the nose in which the pain in the head was most severe; the use of a stream of carbonic-acid gas passed into the nose for one or two minutes, at the end of which time it gave rise to a sharp momentary pain in the occiput, if it proved of any value in relieving the cephalalgia; the administration of carbonates in such a way as to give rise to the generation of carbonic acid in the stomach; the use of aconite, quinine, and tannin, and the use of cannabis indica.

Dr. SEGUIN stated that he had found guarana to cure about half of the cases in which it was administered. He had used also, with much benefit, from five to fifteen minims of Magendie containing about $\frac{1}{100}$ of a grain of atropia. He had used also cannabis indica. The method was to persevere in its use, giving one-half grain daily to men, and one-third of a grain to women, and continuing its use for months.

Dr. GARRISH referred to the use of gelseminum sempervirens in twenty-drop doses.

Bibliographical and Literary Notes.

ART. I.—*Civil Malpractice: A Treatise on Surgical Jurisprudence, with Chapters on Skill in Diagnosis and Treatment, Prognosis in Fractures, and on Negligence.* By MILO A. McCLELLAND, M. D. New York: Hurd & Houghton, 1877. Pp. 529.

THE author of this good and timely work made his *début* as a medical author in 1873, by a report on civil malpractice, which was presented to the Military Tract Society. Encouraged by the success of this *brochure*, he set about collecting material for a more exhaustive treatise, and the result of his labors is embodied in the publication now before us.

He commences by a division of his subject into ethical, civil, and criminal malpractice; and he treats of the two former to the exclusion of the last, which does not find place in a book on the civil duties and responsibilities of medical practitioners.

A chapter of fifteen pages is devoted to ethical malpractice, which the author defines to be suits brought by persons claiming to be medical men, against physicians or medical societies, for alleged insults to their professional dignity. The chapter cannot be said to be out of place in a complete manual of civil malpractice. It is novel, and will repay perusal.

By far the larger part of the book is occupied with the important subject of civil malpractice, to elucidate which the author has drawn extensively, and with good judgment, on a number of Superior Court decisions, and also, with no less tact, on some non-appealed decisions. His object in giving the latter is to show how "such cases are disposed of by courts and juries." Taken altogether, these decisions cover a variety of important surgical emergencies. They include fractures of all kinds, dislocations, amputations, ophthalmic surgery, obstetric cases, and a number of miscellaneous matters, such as venesection, opening an abscess, using a bougie, and vaccination.

The chapters on civil malpractice bring to light several legal principles which have been established by Superior Court rulings. It may be well to call attention to a few of these. The law requires three things of the medical practitioner, viz., reasonable skill, ordinary care, and the use of his best judgment in doubtful cases. By reasonable skill is meant "the least amount of skill with which a fair proportion of the practitioners of a given locality are endowed." When the line of treatment and its results are called in question, the law holds that the plaintiff must prove the management to have been negligent, and he must also prove that the injury of which he complains was not caused by his own negligence. In Ritchey *vs.* West (p. 108), it is ruled that the surgeon who does not pay a second visit to see the progress of the case is guilty of negligence in the legal sense, unless his services have been formally dispensed with. In the celebrated case of Leighton *vs.* Sargent, Judge Bell emphasized the rule, that no surgeon or physician is a warranter of the result, and that he is not legally responsible for a non-cure, unless he has previously bound himself to effect one (p. 211).

Leaving any further enumeration of these principles, all of which, and many besides, will be found scattered through these chapters, we must pass to the concluding part of the book, where the author epitomizes the opinions of standard medical authors on the points brought out in the detail of cases. The chapters of this section are severally headed "Skill in Diagnosis," "Skill in Treatment," "Prognosis in Fractures," "Negligence," "Contributory Negligence," and "Negligence of Physicians and Surgeons." Discussion in the first of these chapters is limited to fractures and dislocations. The author alludes to the difficulty of diagnosing the exact character of injuries near or involving joints, and enforces the lesson of gentleness in examining broken limbs by quotations from Hamilton and Gross. He says that in country practice there is great prejudice against anæsthetics, a prejudice which is encouraged by some physicians; and that, in consequence, those who would use them are deterred by the fear that if any evil followed it would be used to the injury of their professional standing. This, if a valid reason against the use of anæsthetics, would also be a valid reason against the use of any novel procedure in surgery. It should not, therefore, deter the surgeon from their employment in every doubtful or complicated case, there being of course no contraindication in the state of the patient. In many cases a precise diagnosis can only be made out by putting the injured person under ether. If there were more brave surgeons there would be fewer sneaks in the profession, and cavillers among the public would soon hold their peace.

Passing over the chapter on "Skill in Treatment," where the author points out the danger of the initial bandage, and discusses at some length the various means of retaining broken bones in apposition, we come to the chapter on "Prognosis in Fractures." This is, on the whole, the most important in the book. It puts the reader in possession of accurate data in reference to fractures, laying before him the invaluable tables of Prof. Hamilton, those of Dr. Hyde, first published in this Journal, and the report of Dr. Sayre on plaster of Paris in the treatment of fractures, accompanied by Dr. Van Wagenen's tables.

The author of this volume is to be congratulated on the success of his undertaking. He has given us a book unique of its kind; one, moreover, which is needed by every medical practitioner, and, we may add, by every lawyer as well. As a work of reference, full of valuable facts and suggestions, and giving, within the comparatively brief compass of five hundred and twenty-nine pages of clear, bold type, what cannot be found in a collected form elsewhere, it supplies a want long felt, and has every claim to meet with favor and acceptance.

ART. II.—*A Century of American Medicine.* 1776–1876. By EDWARD H. CLARKE, M. D., HENRY J. BIGELOW, M. D., SAMUEL D. GROSS, M. D., T. GAILLARD THOMAS, M. D., and J. S. BILLINGS, M. D. 12mo, pp. 366. Philadelphia: Henry C. Lea, 1876.

THE articles comprised in this book appeared during the year 1876 in the *American Journal of the Medical Sciences*, and, for the benefit of those who did not read the original articles, we will briefly set forth a plan of the work. The publisher aimed to collect articles upon medicine, written by gentlemen thoroughly conversant with their respective branches, the whole to constitute a complete history of the medical profession during the first hundred years of our national existence.

Dr. Clarke, in the article on "Practical Medicine," recounts, with remarkable perspicuity and conciseness, the steps which the profession has taken in this country enabling it to occupy the exalted position it now fills. In alluding to some criticism which has been indulged in concerning the lack of professional investigation during the first fifty years of our national existence, Dr. Clarke states that as much was accomplished as could be expected of any profession, in a new country, without more of a starting-point. Moreover, it is shown that the seeds of later scientific research were actually sown even in that early day, the fact being attested by the honorable mention of many of the illustrious names who adorned the medical profession at that time. The author gives the history of the development of medical education and the methods of investigation, and recounts the many discoveries in pathology and therapeutics which have been published from time to time. The article is well calculated to refresh the memory of the reader upon many points; and it is really surprising to find how much the world is indebted to the medical profession in the United States.

Dr. Henry J. Bigelow, of Harvard University, contributes "A History of the Discovery of Modern Anæsthesia," in which the whole story of the perfection of the process is told. Morton is credited with being the true prosecutor and demonstrator of the process of making painless operations.

Dr. Gross writes upon "Surgery." The scope of this article is very similar to that of Dr. Clarke on "Medicine," the author mentioning what seems to be every discovery in surgery, and every new operation performed in this country. In these essays we have observed some overlapping of special subjects in a few instances, although not enough to detract materially from their interest. Both Clarke and Gross mention the principle of aspiration, as demonstrated by Bowditch in thoracentesis, and other questions are similarly taken up by the different writers.

Dr. Thomas contributes the article on "Obstetrics and Gynæcology." When we remember that the oxytoxic effects of ergot were first demonstrated to the profession by Dr. John Stevens, of New York; that ovariotomy was first performed, and successfully, by McDowell, of Kentucky; that Sims invented the successful method of treating vesico-vaginal fistula; and that White, of Buffalo, is the father of the operation for reducing chronic inversion of the uterus, we may look with just pride upon the achievements of American gynæcologists. Dr. Thomas mentions apparently all of much interest that has been achieved in his department.

The article by Surgeon J. S. Billings, U. S. A., on "Literature and Institutions," exhibits a rare acquaintance with the medical literature of this country. A copious list of medical works is given, with a brief biography of some of the contributors to our literature. Medical journalism is commented upon, as well as medical teaching in the most important schools, together with their histories.

In this notice we have purposely refrained from particularizing very much, lest we should be led into discussions beyond our proper limits. We do not hesitate to recommend the volume, as it will tend to impress the younger members of the profession with the importance of scientific investigation and professional zeal.

Art. III.—*Myelitis of the Anterior Horns, or Spinal Paralysis of the Adult and Child.* By E. C. Seguin, M. D. New York: Putnam's Sons, 1877.

Of late considerable attention has been given to a group of symptoms, at once atrophic and paralytic, attended by loss of reaction to the faradaic current in the affected muscles.

Prof. Seguin gave us a valuable paper on this disease in 1874. This paper is now reprinted, with many important additions, and no little labor. General interest in the subject dates from the publication of Gombault's case, with autopsy, in 1867. On this case Prof. Westphal, of Berlin (*Archiv für Psychiatrie und Nervenkrankheiten*, Bd. vi., p. 810, *et seq.*), makes a criticism which the author regards as insufficient and partial (p. 84). Westphal contends that the pigmentary deposits in the nerve-cells were not necessarily indicative of myelitis, for the reason that the patient was sixty-seven years of age. The autopsy, therefore, may have revealed nothing but senility. He also expressed surprise that the same conditions found to exist in a "certain number" of the cells of the hypoglossal nucleus caused no disturbance of speech during life. This is from high authority—from one thoroughly versed in the methods employed by Charcot and his pupils—and we ought to accept it as honest scientific skepticism applied to a field where there is still too much tendency to believe in the statements of others. The use of such a doubtful case as that of Gombault as evidence of the existence of myelitis seems to us to be inconsistent with the inductive method. We have given prominence to this point, as the *raison d'être* of the book is here to be found, and because, as it seems to us, a prepossession in favor of myelitis of the anterior horns is more apparent than the effort to present an exhaustive *exposé* of the related facts *pro* and *con*. In general, it is a very able essay, setting forth the honest convictions of the author, and enriched by careful reports of cases abounding in clinical facts, most carefully observed. Before another edition, more autopsies may be made, and myelitis of the anterior horns in the adult may become a fact.

ART. IV.—*Transactions of the New York Pathological Society.* Founded in 1844. Vol. I. *Based on the Proceedings for the Year* 1875, *and largely supplemented from the Records of* 1844 *to* 1872. JOHN C. PETERS, M. D., Editor; GEORGE F. SHRADY, M. D., E. C. SEGUIN, M. D., THOMAS E. SATTERTHWAITE, M. D., Committee on Publication. 8vo, pp. lx–272.

MANY will doubtless be glad to witness the publication of the "Transactions" of the New York Pathological Society from its organization to the present time. We are told in the preface that the compilers have arranged the accumulated products of the Society so that all that is of much value in the proceedings can be published at any time, there being sufficient material for several volumes.

This volume, in addition to giving a history of the Society, list of members, etc., contains reports of many interesting cases, which will prove of value to all who take pains to study them.

ART. V.—*Annual Reports on Diseases of the Chest.* Under the Direction of HORACE DOBELL, M. D., etc. Assisted by Numerous and Distinguished Coadjutors in Different Parts of the World. Chief Assistant Editors: R. SHINGLETON SMITH, M. D., etc.; CHARLES MEYMOTT TIDY, M. B., etc.; ADOLPHE WAHLTUCH, M. D., etc.; R. WHARRY, M. B., etc. Vol. II. June 1, 1875, to June 1, 1876. 8vo, pp. 307. London: Smith, Elder & Co., 1876.

DR. DOBELL seeks to collect from medical publications of all sorts throughout the world all important thoughts advanced upon diseases of the chest, so that his report, " when collected from year to year, will constitute a most comprehensive, concise, and reliable book of reference " on that class of diseases.

The collection constituting this fair-sized volume shows an indefatigable zeal on the part of the contributors, and it would seem that extracts from everything of any importance published in every country on chest-diseases had been gathered. In the section on the United States a somewhat lengthy *résumé* of Prof. Flint's work on " Phthisis " is given.

Books and Pamphlets Received. — Surgical Diagnosis: An Inaugural Lecture. By James G. Beaney, F. R. C. S. E., Senior Surgeon to the Melbourne Hospital. Melbourne: F. F. Baillière, 1877.

The Cure of Rupture, reducible and irreducible; also of Varicocele and Hydrocele, by New Methods. By George Heaton, M. D., Member Mass. Med. Society, Fellow of the Royal Chirurgical Society of London, etc. Arranged and edited by J. H. Davenport, A. M., M. D. Harv., Member Mass. Med. Society, etc. Boston: H. O. Houghton & Co., 1877.

New Intra-Uterine Pessary, secured and steadied in Position by Silver Suture. By V. H. Taliaferro, M. D., Professor of Obstetrics in the Atlanta (Ga.) Medical College.

Ninth Annual Report of the New York Orthopedic Dispensary and Hospital (for children with spine and hip-diseases), 126 East Fifty-ninth Street, New York. By N. M. Shaffer, M. D.

Hydrate of Chloral in Obstetric Practice. By W. L. Richardson, M. D., Visiting Physician of the Boston Lying-in Hospital. Reprinted from Vol. I., Gynecological Transactions.

Transactions of the American Gynecological Society. Vol. I. For the Year 1876. Boston: H. O. Houghton & Co. Cambridge: the Riverside Press, 1877. Pp. 396.

Latent Gonorrhœa in the Female. Especially with Regard to its Influence on Fertility. By Emil Noeggerath, M. D. Reprinted from Vol. I., Gynecological Transactions, 1876.

Note on the Administration of Phosphorus. Republished from the Proceedings of the American Pharmaceutical Association for 1876. By Edward R. Squibb, M. D., of Brooklyn.

What is the Comparative Physiological and Therapeutic Action of Free Phosphorus and the Hypophosphites? By S. R. Percy, M. D. Extracted from the Transactions of the New York State Medical Society.

Therapeutic Use of Faradic and Galvanic Currents in the Electro-Thermal Bath, with History of Cases. By Justin Hayes, M. D. Chicago: Jansen, McClurg & Co., 1877.

The Relations of Ancient Medicine to Gynecology. By Edward W. Jenks, M. D., Professor of Obstetrics in Detroit Medical College, etc. Reprinted from the *Detroit Medical Journal*, May, 1877.

A Paper on Medicated Ice. By J. Varnum Mott, M. D. New York: Mucklow & Simon, 1877. Pp. 7.

Prescription and Clinic Record. Bedside Notes. By E. Seguin, M. D. New York: W. Wood & Co.

Transactions of the Vermont Medical Society for the Years 1874, 1875, and 1876.

Transactions of the Medical Society of the District of Columbia. April, 1877. Vol. IV., No. 2.

Charter, Constitution, By-Laws, List of Officers and Members, etc., of the Medico-Legal Society of the City of New York.

Reports on the Progress of Medicine.

CONTRIBUTED BY DRS. GEORGE R. CUTTER, EDWARD FRANKEL, AND E. H. BRADFORD.

SURGERY.

Method of Methodical Compression and Immobilization.—M. Chassagny explained his method of compression and immobilization before the Académie des Sciences, December 18, 1876. The region to be compressed is covered or surrounded by a bag of soft rubber, to which are attached two tubes, and the part is then enveloped in a solid and inextensible dressing or bandage; the bag is then injected with air or water, thus coming into close apposition with and compressing the part. When the breast, or a tumor, or aneurismal sac, is concerned, the bag has the form of a bonnet, and is fixed by straps to adapt itself to the part. The rubber bag is filled with either air or water, and the rubber should be elastic and extensible. Contrary to what happens when ordinary means of compression are employed, there is no œdema of the non-compressed parts. No mark of the compression remains, which is due to the rounded borders of the bag; these produce no strangulation, and offer no obstruction to the venous circulation under the entire dressing.—*Gaz. Méd. de Paris*, No. 1, 1877.

E. F.

Section of Inferior Dental Nerve for the Cure of Neuralgia.—M. Torrillon before the Société de Chirurgie, December 20, 1876, related the case of a female, thirty-one years old, who entered St.-Antoine Hospital last July. One morning, eighteen months previous, while washing her face, she felt a dull pain in the lower portion of the right jaw. On the following day true neuralgic pains set in; the slightest contact, often even the least movement, provoked an intense shooting-pain, radiating from the right labial commissure to the ear. During 1875 the patient was subjected to anti-neuralgic treatment, with slight benefit, but the pains returned with increased severity, so that speaking, mastication, motion, etc., gave rise to paroxysms of pain lasting from one to two minutes, during which the salivary and nasal secretions were increased. The patient was anæmic and much emaciated on entering the hospital. It was found, on gently touching or tickling, that the portion of the jaw situated one centimetre from the commissure, equivalent to a two-franc piece, was the most sensitive. Strong pressure caused no pain. The teeth of the corresponding side were healthy. On August 1st, Torrillon proceeded to operate, with the object of dividing the dental nerve behind its entrance into the dental canal. The mouth was kept open by a double gag, and a vertical incision was made from the superior to the inferior molar, dividing the mucous membrane and adjacent tissues to the anterior border of the tendon of the temporal muscle. The tissues were separated so as to be able to penetrate between the internal pterygoid and the coronoid process. The nerve was thus reached, but could not be divided before the gag was removed from the mouth, so as to relax the internal pterygoid. The relief was immediate, and on the following day it was found that sensibility to touch, temperature, and pain, was abolished in the chin-region extending from the medial line to a vertical line passing through the right labial commissure. At the present time the patient, in full health, complains of a slight pruritus in the region of the divided nerve. Tickling is felt perfectly, as also heat and cold, and the prick of a pin, which causes an indescribable feeling of formication. The remarkable fact in the case is, that the portion where these sensations are thus perverted does not commence at the median line, but about one centimetre to the right. The sensibility of the tongue and the taste are slightly diminished toward the apex on the right side, otherwise the patient suffers no inconvenience.—*Gaz. Méd.*, No. 1, 1877. E. F.

Luxation of the Cuboid.—In the service of M. Gosselin, at the Hôpital de la Charité, a case presented itself, of which no other examples have been recorded. A vigorous young man, nineteen years old, while carrying a burden, turned his left foot, and walking became impossible. At the hospital on the following morning the foot was much swollen; no projection was discovered. On pressing on the instep a prominence was discovered, behind which there was a marked depression. It was evident that this displacement corresponded to the situation of the cuboid; that is, before the fourth metatarsal bone. The displaced bone was somewhat movable, but there was no crepitation. The small bones of the foot may become comminuted in breaking, but cannot be broken transversely. M. Gosselin applied extension to the foot, and placed it in a position of demi-flexion, so as to relax the flexor tendons, and then exerted strong pressure on the bony prominence; reduction took place, with a *bruit.* There was reason to believe that the bone would remain in its place after rest and the application of a moderately tight bandage.—*Rev. de Thér. Méd. Chir.*, No. 16, 1876. E. F.

The Occurrence of Splenic Tumor in Recent Syphilitic Infection.—In the further elaboration of Weil's investigations, Weber (*D. Arch. f. kl. Med.*, 4, 5, 1876) arrived at the result that 7.5 per cent. of syphilitic individuals presented a distinctly demonstrable tumor of the spleen; that under anti-syphilitic (mercurial) treatment the tumor retrogrades simultaneously with the other symptoms. Hence the author concludes that it is to be looked upon as a symptom of constitutional syphilis, and furnishes a valuable guide in the treatment, especially in lymphatic patients, so called, in whom swelling of the lymphatic glands, independent of syphilitic infection, offers no aid in the diagnosis. The splenic tumor disappearing upon anti-syphilitic treatment indicates that the latter should be discontinued, even though the glandular enlargement persists. Tumor of the spleen is observable eight to twelve weeks after infection, five to ten weeks after the initial sclerosis, and one to two weeks after the appearance of general manifestations, and usually continues four to eight weeks.

E. F.

Simple Mode of Checking Epistaxis.—The following simple expedient is mentioned in the *Tribune Médicale* as being often successful, even after plugging the nares, injection of perchloride of iron, etc., have failed: An emetic, given to the extent of producing vomiting, will permanently check the epistaxis.

E. H. B.

Nitrate of Silver Injections in Chronic Cystitis.—Dr. S. Giacomo finds strong injections of nitrate of silver very useful in certain cases of chronic cystitis. After using, with moderate success, a solution of five centigrammes of the salt to thirty grammes of water, he began the use of a stronger solution—eighty centigrammes of the nitrate to thirty grammes of water—and cured the disease with great rapidity. He divides vesical catarrh into two species: the one caused and maintained by urethral stricture, prostatic hypertrophy, calculus, or some renal or general disease of the system, the treatment of which should be directed toward the removal of the cause; the other species is idiopathic, or, as it is commonly called, primary. If, after the removal of all complications, it does not yield to ordinary therapeutical means, it should be treated by energetic local medication. Slightly caustic injections render but little, if any, service, while the former produces a salutary substitutive inflammation of the altered vesical mucous membrane. In short, the substitutive action of the caustic should be increased in proportion to the strength and obstinacy of the phlogistic process in the diseased membrane.—*L'Independente* and *Lo Sperimentale*, February, 1877.

G. R. C.

THEORY AND PRACTICE.

On Pernicious Anæmia.—This pathological condition, to which, of late, much attention has been directed, is discussed by H. Quincke in *Volkmann's Series of Clinical Lectures.* As a special disease, progressive pernicious anæmia was first described by Biermer. Most of his patients were females, who presented the symptoms of intense anæmia, and the conditions associated with and following it. In almost all cases there were retinal hæmorrhages; less often petechiæ and capillary cerebral and meningeal hæmorrhages. All but one of the cases died. The autopsies showed fatty degeneration of the heart and inner coats of the arteries and capillaries. Quincke has observed nine cases—four males and five females—their ages ranging from twenty-five to fifty-nine years; also one girl of eleven years. The cases were all characterized by a waxy appearance of the skin and mucous membranes, and œdema of the face; in a few cases there were dropsical symptoms. All patients were exceedingly feeble and decrepit, and could not maintain themselves out of bed. The pulse was frequent, small, and soft; there were marked anæmic murmurs at the heart, especially over the pulmonary artery. The heart is often much dilated; its muscular structure sometimes, though by no means constantly, fatty. In a few cases the liver was moderately fatty, but in other cases it was not pale, but of a yellowish-brown color. A few cases had repeated epistaxis; others had petechiæ on the skin; retinal hemorrhages were constant, without causing essential errors of vision. The temperature was either normal, or there was a moderate remittent fever, seldom exceeding 39° C. No change was found in the spleen, lymphatic glands, and spinal marrow. The disease develops slowly and advances steadily. Its entire duration is from one-third of a year to one year, and death takes place from exhaustion, less often from some complication; recovery is rare. Two of Quincke's cases recovered. In pregnant females the prognosis is absolutely unfavorable; so far, all have died a few hours after miscarriage. In the more advanced stages of the disease, the patients, in their general symptoms, resemble those affected with renal disease at the commencement of renal atrophy. Albuminuria is not constant; the left ventricle is never hypertrophied. The appearance of other cases gives rise to the suspicion of chronic ulcer or cancer of the stomach; febrile cases associated with diarrhœa may simulate typhoid fever. Ophthalmoscopic examination shows retinal hæmorrhages; occasionally, also, the condition found in Bright's disease. In regard to the etiology of the disease, it is worthy of mention that a large number of cases were observed in Switzerland; that many of the females were pregnant; that the majority—but by no means all—of the patients lived in destitute circumstances. The entire mass of the blood, which is thin, light-colored, and coagulates badly, continues to diminish. The diminution of the red corpuscles is remarkable, as also their unequal size, suggesting their deficient development or degeneration. In a few cases a remarkably large amount of iron was found in the liver; which fact, however, does not exclude the possible influence of medication. Pernicious anæmia is the result of the most varied morbid processes. The treatment is that of the other forms of anæmia. No successes were achieved with transfusions of blood.

E. F.

Enuresis of Childhood treated by Electrization of the Anal Sphincter.—Dr. Ultzman has obtained surprising success in the treatment of enuresis in childhood by means of induced currents. One *réophore* is introduced into the rectum, or into the vagina, and the other is applied to the symphysis or the upper part of the thigh. The duration of the treatment, with a daily *séance*, was from four to six weeks. Herschmann has confirmed the good results of this treatment; he has also obtained good results by means of increasing doses of belladonna.—*Lo Sperimentale* and *Gazz. Med. Ital. Venete*, No. 6, 1877. G. R. C.

Cases in which Milk acts as a Diuretic.—For a number of years milk has been considered one of the best diuretics, while being at the same time excellent nourishment, and never disagreeing with the patient; digitalis, squills, and the potash salts must be given upon special indications. Milk, however, acts only in anasarca, and Prof. Lee states that the latter disappears rapidly under the influence of milk, while ascites will persist. This is because ascites is often dependent on an affection of the liver, or else (and this applies to essential peritoneal effusions) the serous membrane which secretes the liquid is more or less affected in its texture. This holds equally true as regards hydrothorax, because the fluid containing much fibrine is absorbed with difficulty, and, furthermore, the pleura is often diseased. Likewise as regards pleurisy, except, perhaps, when the effusion is very recent and not yet encysted. But. in general dropsy, milk taken in doses of one and a half to three litres during the day is one of the most efficient diuretics.—*Moniteur de Thér.*, *Rev. de Thérap.* E. F.

Cysticercus in the Pons Varolii; Sudden Death. By Frédet (*Giornale Veneto di Scienze*).—In the absence of an autopsy in a case of sudden, unexpected death, the cause frequently remains unexplained, which then we are inclined to attribute to apoplexy. It is not infrequent, however, that tumors dependent on parasites cause death unexpectedly, while during life the symptoms of disease were but insignificant. In proof of this assertion, the author relates the case of a young man, healthy in appearance and strong, twenty-two years of age, who suddenly fell dead in the street. He was found stretched out his full length, with his face toward the ground. His clothes, after removal, were found defiled with excrements. On opening the skull, the meninges and cerebral hemispheres were found normal. At the anterior portion of the pons varolii there was observed a gray membrane which was not contiguous with the brain substance, but looked like a cyst, and which, on section, was found to contain a cysticercus, easily recognizable by its ampullæ and hooks. E. F.

OBSTETRICS.

Parturition before the Arrival of the Midwife.—Since these parturitions are rarely spoken of, one would suppose that they were not frequent nor of much importance. Dr. Mourier (*Ugeskr. f. Laeger*, R. 3, Bd. 19) has caused the records of his district for the last twelve years to be examined, from which it appears that during this period there were 691 births, 53 of which occurred before the arrival of the midwife—who was absent, therefore, in about every fourteenth case. This was usually caused by the message being sent too late. Seven hundred and three children (twins 12 times) were born; 22 of them were still-born, about 3.13 per cent.; of 650 born after the midwife's arrival, 17 were still-born, about 2.63 per cent., and of 53 born before her arrival, 5 were still-born, about 9.43 per cent. The cause of this bad result for children born before the arrival of the midwife is sought for in various directions. There was a relatively large number of immature children among those born before the arrival of the midwife—9 in 53, about 16.98 per cent., against, in all, 28 in 703, about 3.98 per cent. It was especially in the birth of mature fœtuses that the absence of the midwife proved unfavorable for the life of the child; for of 44 mature children born before her arrival, 2 died, about 4.55 per cent.; of 632 mature ones born after her arrival, 10 were still-born, about 1.58 per cent. The birth of bastards occurred relatively much more frequently before the arrival of the midwife than that of legitimate children. The proportion was 9 to 58, about 15.51 per cent., against 44 to 645, about 6.82 per cent.; and among the bastards the mortality was relatively greater among those born before the midwife's arrival than among those born after her arrival, namely, 2 of 9, about 22.22 per cent., against 1 of 49, about 2.04 per cent. The same was the case with the legitimate children, though in a less degree, namely, 3 deaths in 44, about 6.82 per cent., born before, and 16 still-births of 601, about 2.66 per cent., born after the midwife's arrival. Of all the illegitimate births (58), 4 were immature, about 6.90 per cent.; of all the legitimate (645), 24 were immature, about 3.72 per cent. Of 703 births, 183 were primiparous and 520 were multiparous; of the former, 8 were born before the midwife's arrival, about 4.37 per cent., and of these 3 were dead, about 37.5 per cent.; of the latter, 45 were born before the midwife's arrival, about 8.65 per cent., and of these 2 were dead, about 4.44 per cent. Of 175 primiparous children born after the arrival of the midwife, 4 were still-born, about 2.39 per cent; of 475 multiparous children born after her arrival, 13 were still-born, about 2.74 per cent. It happens, therefore, nearly twice as seldom to a primipara as to a multipara that she gives birth to a child before the

arrival of the midwife; but the mortality is relatively greater among the primipara's children than among those born of multipara.—*Nordiskt Med. Arkiv.*, B. vii., No. 4.
G. R. C.

Milk Secretion checked by Opodeldoc.—Dr. R. Monti reports the case of a woman who had nursed her child for eight months, and who had neuralgia in the right forearm, followed by stiffness and pain on motion. To remove the latter, opodeldoc was rubbed on the palmar surface of the forearm. The evening of the same day the secretion of milk was very considerably lessened. The next day opodeldoc was again used, and again the secretion of milk diminished at night. This was repeated as often as the liniment was used, and the secretion returned when the former was discontinued.

Monti also remarks that his wife was attacked, during the fourth month of nursing, with a mastitis of the right breast, which prevented her from nursing with it. Opodeldoc was rubbed into the right arm, and the secretion from the corresponding mamma was at once diminished.

Dr. Monti is unable to say whether the effect was due to the camphor or to the ammonia of the liniment.—*Annali Universali di Med.*, No. 235.
G. R. C.

THERAPEUTICS.

To make Leeches bite promptly.—Place the leeches in a glass half full of cold water. Cleanse the part to which they are to be applied carefully with warm water, and then apply the glass containing the leeches to the part. They attach themselves with surprising rapidity. The patients often speak of the bites appearing to be simultaneous. When the animals have all become attached, allow the water to escape into a sponge, or cloth, so as not to wet the patient.—*Gazz. Med. Ital. Lomb.*, December, 1876.
G. R. C.

Citrate of Chinoidine in Fevers.—From the original investigations of Buchner, recently repeated by Haller at the General Hospital of Vienna, it has been ascertained that the citrate of chinoidine is about as successful as the sulphate of quinine in the treatment of intermittent fever, while the cost of the former is very much less than that of the latter. Haller gives a drachm of the citrate in three ounces of water and half an ounce of cinnamon water, for two or three hours during the apyrexia. Of forty cases thus treated, only one had a return of the fever, and this one was also cured by larger doses.—*Gazz. Med. Ital. Lomb.*, December, 1876.
G. R. C.

PATHOLOGY.

The Etiology of Cough.—M. G. de Mussy presented to the Academy of Medicine, January 9, 1877, some very interesting anatomical specimens, for the purpose of elucidating the obscure question of the etiology of cough in general, and that of whooping-cough in particular. In the autopsies of infants dying with the latter disease he has always found ganglionic engorgements of the mediastinum, with compression of the recurrent nerves. In other patients attacked with bronchial adenopathies, and who had coughed during life, he has also found the recurrent nerves more or less compressed. He concludes from this that the nervous excitation produced by the compression must be the cause of the cough. This interpretation of these facts also coincides with the idea, which he has long maintained, that whooping-cough is an internal eruptive fever. There are local lesions of the pulmonary mucous membrane, engorgement of the peribronchial ganglia, compression of the recurrent nerves, accesses of cough. Moreover, the complete destruction of the motor nerves of the muscle of the glottis explains the peculiar cases of aphonia which are frequently observed after whooping-cough, when it is cured, and likewise the long duration of certain cases of pertussis, which sometimes persist for months and years.—*Le Progrès Méd.*, January, 1877. G. R. C.

PHYSIOLOGY.

Movement in the Human Brain.—MM. Giacomini and Mosso showed recently, before the Academy of Sciences at Paris, the photograph of a woman, thirty-seven years old, who had lost a large portion of the frontal bone, and of the two parietal bones, from a syphilitic affection of the cranial bones. These gentlemen had studied the movements of the brain of the patient, employing the graphic method, using an apparatus of Marey's to trace the motion. These tracings show in the human brain, even during the most perfect possible repose of body and mind, three different motions: 1. *Pulsations*, following each cardiac contraction; 2. *Oscillations*, due to the movements of respiration; 3. *Undulations*, larger curves of motion, due to the motion of the vessels in cerebral activity in sleep, and other states as yet undetermined.—*Gaz. Hebd.*, January 19, 1877. E. H. B.

Miscellany.

To the Medical Profession.—*Statements respecting the Separation of Dr.* J. Marion Sims *from the Woman's Hospital, New York.*—In November, 1874, Dr. J. Marion Sims tendered his resignation as a member of the Medical Board of the Woman's Hospital above mentioned; since which time insinuations—and, more recently, distinct charges—have been widely circulated, of unworthy conduct in connection with that matter of ourselves as his colleagues in that Board. Had they been confined to New York, where all the parties concerned are well known, we should still have remained silent; but the recent extensive distribution to the profession in this country of a biographical sketch containing such charges compels us, in justice to ourselves and to the Woman's Hospital, to make the following statement of facts:

In January, 1874, the Board of Governors of the Woman's Hospital passed the two following regulations: 1. That no cases of carcinoma uteri should be admitted into the hospital; and 2. That not more than fifteen spectators, in addition to the hospital staff, should be present at any operation. The Medical Board formally discussed these rules, and decided *unanimously* to abide by them, as being called for, and conducive to the best interests of patients and of the hospital—Dr. Sims voting affirmatively with the undersigned. And from this time the Board worked, as it had previously done, in entire harmony, so far as we were aware, until Dr. Sims resigned, several months afterward.

As the Medical Board is required to make its annual report at the anniversary meeting of the Hospital in November, said report was, on the preceding day, presented by the Secretary, as usual, to each member of this Board for examination, alteration, and indorsement; and was *unanimously* approved, without any suggestion of alteration by any member of the Board. It alluded specially to the regulation respecting the number of spectators, stating that "the Medical Board desires, and has ever desired, in the interest of the patients and of themselves, that the number of the spectators should be limited," and "announces its determination to do its utmost to observe the law that had been passed."

On the following day, after the customary exercises of the anniversary meeting, including the reading of said report, were concluded, Dr. Sims rose and delivered a speech severely reflecting upon the tyrannical course of the Board of Governors, as he termed it, in establishing the two rules above specified—and which, as has been seen, he had himself unqualifiedly indorsed; said he would no longer submit to such treatment, and threatened to resign unless the Board of Governors rescinded these rules at their next meeting. Colonel Davis, a member of that Board, after expressing his regret that Dr. Sims had obtruded his private grievances on that occasion, replied at some length, when the meeting adjourned.

The undersigned were surprised and astonished at the course taken by Dr. Sims, and, in conversation with the members of the Board of Governors and the Lady Managers, after the adjournment, disclaimed all sympathy with it, as an unwarrantable misrepresentation of the feelings of the Medical Board. In a few weeks the regular meeting of the Board of Governors was held, and Dr. Sims's resignation was unanimously accepted.

The charges above alluded to are, that we urged Dr. Sims to a bold and dignified stand for the interests and the honor of the profession, and then meanly deserted him "in the time of conflict."

Each of these charges is unqualifiedly false. We neither urged nor suggested *any* course to Dr. Sims, he having acted entirely unexpectedly to us. Nor did the issue he made touch the interest or the honor of the profession at all. He made it entirely on his own account and for his own personal reasons, some of which were given in his speech. We may also remark that he had at no time been the recognized champion or spokesman of the Medical Board, and that he admitted he was speaking for himself at the time.

In regard to deserting Dr. Sims in the time of conflict, we merely say that we could scarcely stultify ourselves so far as to defend him in his violent contradictions both of the letter and the spirit of the report of the Medical Board, which he, with ourselves, had only twenty-four hours before agreed to in every particular. We could only deplore his inconsistency and regret its consequences, but not interfere, unasked, in his own business.

If, therefore, Dr. Sims is to be a martyr in connection with this affair, we protest against his being regarded by the profession as one of our making.

E. R. Peaslee,
T. A. Emmet,
T. Gaillard Thomas.

May 5, 1877.

Appointments, Honors, etc.—Drs. Wm. T. Lusk, Wm. Goodell, J. R. Chadwick, and H. R. Storer, have been elected Corresponding Fellows of the Obstetrical Society of London.—Dr. G. R. Cutter has been appointed a Surgeon of the New York Eye and Ear Infirmary, in the place of Herman Althof, deceased.—Dr. Wm. B. Atkinson has been appointed Lecturer on Diseases of Children in Jefferson Medical College.

Prof. Rand has resigned the chair of Chemistry in the same institution, on account of failing health, and Dr. Robert E. Rogers has been appointed in his place. Dr. Lawrence Turnbull has been elected Aurist, and Dr. Mears Gynecologist, in the same college.—Profs. Francis Gurney Smith and John Neill have resigned respectively the chairs of Institutes and of Clinical Surgery in the University of Pennsylvania, on account of failure of health.—Dr. John P. Reynolds has been appointed to the chair of Obstetrics at the Harvard Medical School, left vacant by the death of Dr. Buckingham. Dr. W. L. Richardson has been appointed Instructor in Obstetrics, and the office of Instructor in Clinical Obstetrics has been abolished.

The fund for the erection of a statue to Liebig in Munich now amounts to about thirty-five thousand dollars.—A new chair—that of Mental Pathology and Diseases of the Encephalon—has been established in the Paris Faculty. M. Ball has been appointed to it.

A Rival of Morton and Wells.—The *Virginia Medical Monthly* for May, 1877, contains a vigorous article by Dr. Sims, in which the claims of Dr. Crawford W. Long, of Athens, Georgia, to be the discoverer of anæsthesia by sulphuric ether are ably advocated. It appears that Dr. Long first administered ether for a surgical operation March 30, 1842, which antedates Morton's claim four years and a half, and Wells's, two years and eight months. In the endeavor to establish the claims of Dr. Long the whole subject of the discovery of anæsthesia by ether is reviewed and discussed, in the light of a large array of dates and facts. Dr. Sims recommends that Congress be petitioned to grant a handsome appropriation to the families of Long, Wells, Morton, and Jackson.

American Medical College Association.—A meeting of the Provisional Association of American Medical Colleges will be held at the Palmer House, Chicago, on Saturday, June 2, 1877, at 10 o'clock A. M. All colleges represented at the meeting of the Association held June, 1876, are invited to send delegates to the ensuing meeting; and all chartered medical colleges in the United States, recognized as "regular" by the colleges already represented in this Association, are also invited to send delegates from their Faculties to the said meeting. J. B. Biddle, M. D., *President.*

Death from Nitrous-Oxide Gas.—The *Lancet* of April 7th reports the death, in Manchester, on March 27th, of a surgeon who had taken nitrous-oxide gas for the purpose of having some teeth extracted. The anæsthetic was administered by the dentist in the usual manner, and the operation was completed, when it was found to be impossible to rouse the patient. The *post-mortem* examination disclosed fatty and valvular disease of the heart.

The Missouri State Medical Association.—The eleventh annual meeting of this Association was held in Kansas City, April 17th, and was largely attended. Dr. F. M. Johnston, of Platte City, was elected president for the ensuing year, and Drs. A. J. Steele and E. W. Schauffler recording secretaries. The next meeting will be held at Sweet Springs, Saline County, on the first Tuesday in June, 1878.

The Faculty of Medicine of Lyons.—By a decree of the President of the Republic, twenty-five chairs have been created for the new Faculty above named. The chair of Experimental and Comparative Anatomy is occupied by M. Chauveau; that of Clinical Surgery, by M. Ollier; and that of Clinical Medicine, by M. Lépine. Most of the other chairs are filled by local celebrities.

Association of American Medical Editors.—The annual meeting of this Association will be held at the Palmer House, Chicago, on Monday evening, June 4, 1877, at 7.30 o'clock.

All medical editors are eligible for membership, and are cordially requested to be present and participate in the meeting. F. H. Davis, *Secretary.*

The Medical and Chirurgical Faculty of the State of Maryland.—The seventy-ninth annual convention of this ancient Society was held in Baltimore, April 10th to 13th, Prof

Christopher Johnston, President, in the chair. Dr. Abram B. Arnold was elected president for the ensuing year.

Medical Society of the State of New York.—The annual meeting of this Society will take place in Albany, June 19th, at 11 A. M., and continue June 20th and 21st.

Translation of Kassowitz.—We regret to be obliged once more to postpone the publication of a highly interesting chapter of this translation, but it will appear in the issue for July.

The Late Dr. H. H. Gregory.—At a regular meeting of the Harlem Medical Association, held May 10th, 1877, the following preamble and resolutions were adopted:

Whereas, It has pleased an all-wise Providence to remove from the sphere of his usefulness our well-beloved associate, Dr. Harvey H. Gregory; and, whereas, while we bow in humble submission to the Divine decree, we desire the unfailing consolation of a tribute to his memory: therefore, be it

Resolved, That in our deceased co-worker we have always found a zealous promoter of the best interests of our profession, a judicious counselor, an enthusiastic friend, and a consistent advocate of harmony in our midst.

Resolved, That to Dr. Gregory this Association owes its organization and much of its usefulness; that it has profited by his practical suggestions and honest endeavors to stimulate the zeal of its members.

Resolved, That the medical profession, especially of this locality, remember with pride his magnanimous record, his cheerful self-sacrifices, his unswerving integrity, and his broad humanity.

Resolved, That with unfeigned sympathy for the bereavement of that family circle around which his best affections clustered, we offer this simple memorial, and with it the assurance that, though he fell at his post with scarcely a warning, and in the prime of his manhood, his career was not without honor nor his mission without fruit.

Resolved, That a copy of these resolutions be presented to the family of our deceased associate, and be also published in the medical journals of the city.

JOHN SHRADY, M. D.,
JOHN B. CAMPBELL, M. D.,
HENRY T. PEIRCE, M. D.,
Committee.

Army Intelligence.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 14 *to May* 13, 1877.

Sloan, W. J., Lieutenant-Colonel.—To be Colonel and Surgeon, *vice* McCormick, deceased.

Perin, G., Major.—To be Lieutenant-Colonel and Surgeon, *vice* Sloan, promoted.

Huntington, D. L., Captain and Assistant Surgeon.—To be Major and Surgeon, *vice* Perin, promoted.

Edwards, L. A., Surgeon.—Leave of absence, on surgeon's certificate of disability, further extended six months. S. O. 101, A. G. O., May 10, 1877.

Magruder, D. S., Surgeon.—Assigned to duty as Attending Surgeon and Examiner of Recruits at St. Louis, Mo. S. O. 82, A. G. O., April 18, 1877.

Alexander, C. T., Surgeon.—When relieved by Surgeon Magruder, to report to commanding general Department of the Columbia, for assignment to duty. S. O. 82, C. S., A. G. O.

Forwood, W. H., Surgeon.—Assigned to duty at Columbia, S. C. S. O. 83, Department of the South, April 26, 1877.

Woodhull, A. A., Surgeon.—To report to commanding general Division of the Pacific and Department of California, for duty in Department of California. S. O. 83, A. G. O., April 19, 1877.

De Graw, C. S., Assistant Surgeon.—Assigned to duty at Oglethorpe Barracks, Savannah, Ga. S. O. 76, Department of the South, April 19, 1877.

Phillips, H. J., Assistant Surgeon.—Granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. S. O. 91, A. G. O., April 28, 1877.

Jessop, S. S., Assistant Surgeon.—Assigned to duty at Charleston, S. C. S. O. 75, Department of the South, April 18, 1877.

Heizmann, C. L., Assistant Surgeon.—Assigned to temporary duty at Fort Wadsworth, N. Y. H. S. O. 96, Division of the Atlantic, May 2, 1877.

De Witt, C., Assistant Surgeon.—Granted leave of absence for one month and twelve days. S. O. 98, A. G. O., May 7, 1877.

De Hanne, J. V., Assistant Surgeon.—To report to commanding general Department of Texas, for assignment to duty. S. O. 83, C. S., A. G. O.

Girard, A. C., Assistant Surgeon. Assigned to duty at Fort Randall, D. T. S. O. 54, Department of Dakota, May 1, 1877.

Woodruff, E., Assistant Surgeon.—To report to commanding general Department of Texas, for assignment to duty. S. O. 83, C. S., A. G. O.

King, William H., Assistant Surgeon.—Assigned to duty at Cheyenne Agency, D. T. S. O. 55, Department of Dakota, May 3, 1877.

Tesson, L. S., Assistant Surgeon.—Assigned to duty at the post to be established at the mouth of the Little Big Horn River, Montana. S. O. 47, Department of Dakota, April 14, 1877.

Gardner, E. F., Assistant Surgeon.—To proceed to Fort Abraham Lincoln, D. T., for duty with column under orders for field-service. S. O. 45, Department of Dakota, April 10, 1877.

Corbusier, W. H., Assistant Surgeon.—Assigned to duty at Charleston, S. C. S. O. 76, C. S., Department of the South.

Shufeldt, R. W., Assistant Surgeon.—Ordered to Fort Laramie, Wy. T., to await further orders. S. O. 51, Department of the Platte, April 19, 1877.

McCormick, Charles, Colonel and Surgeon.—Died at New York City, April 28, 1877.

Andrews, W. C. C., Assistant Surgeon.—Drowned near Fort Stevens, Oregon, April 19, 1877.

Obituary.

Dr. Henry S. Cheever, late Professor of Materia Medica and Therapeutics and of Physiology in the University of Michigan, and of Physiology in Long Island College Hospital, died at Ann Arbor, March 31st, aged forty years.

Dr. Harvey Holmes Gregory, who died suddenly in Harlem, May 1st, was born October 2, 1829, at Modena, Ulster County, N. Y. He was the eldest son of Milton S. Gregory and Charlotte P. Holmes, his wife. His academic education was received at the Amenia Seminary, Dutchess County; his medical education at Castleton, Vt., and the College of Physicians and Surgeons, New York, from which latter institution he was graduated in 1853. After a brief residence in Williamsburgh, L. I., he began the practice of his profession in Harlem when it was a mere suburban village, and there he remained in active practice until the date of his death. He was a man of strong, original character, yet of such a genial and kindly temper that he made himself universally beloved and respected in the community in which he lived. Of superb physique, and apparently in the prime of life, his untimely death is matter alike of surprise and regret, both to the profession and to the many friends who depended on his counsel in the hour of sickness and distress.

We announce with sorrow and regret the sudden death of Dr. Charles A. Budd, which took place in this city on the 17th ult. A sketch of his life will appear hereafter.

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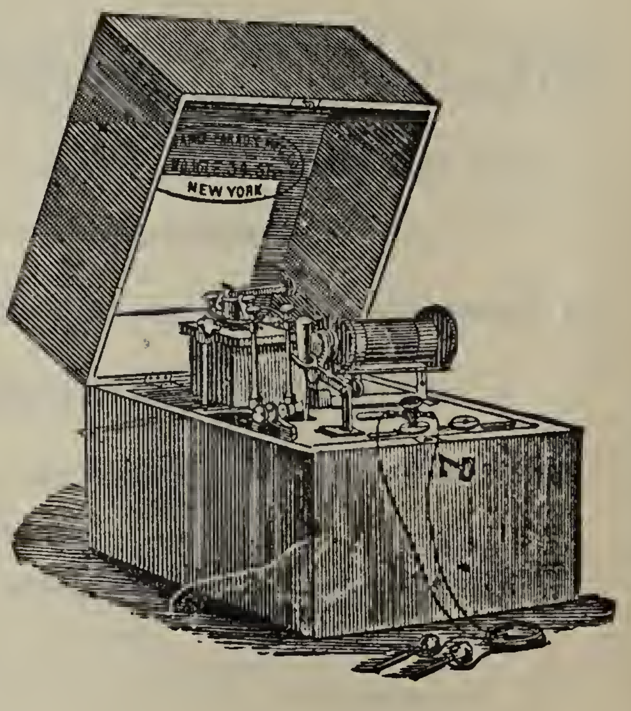

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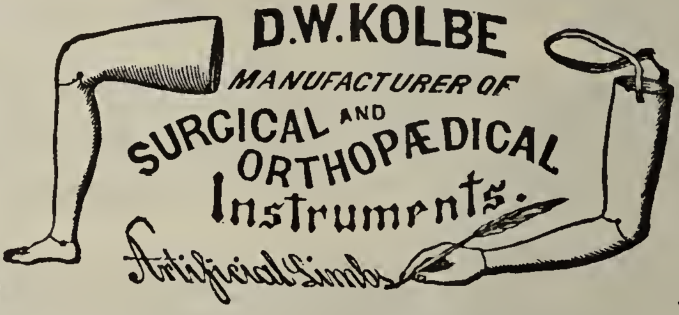

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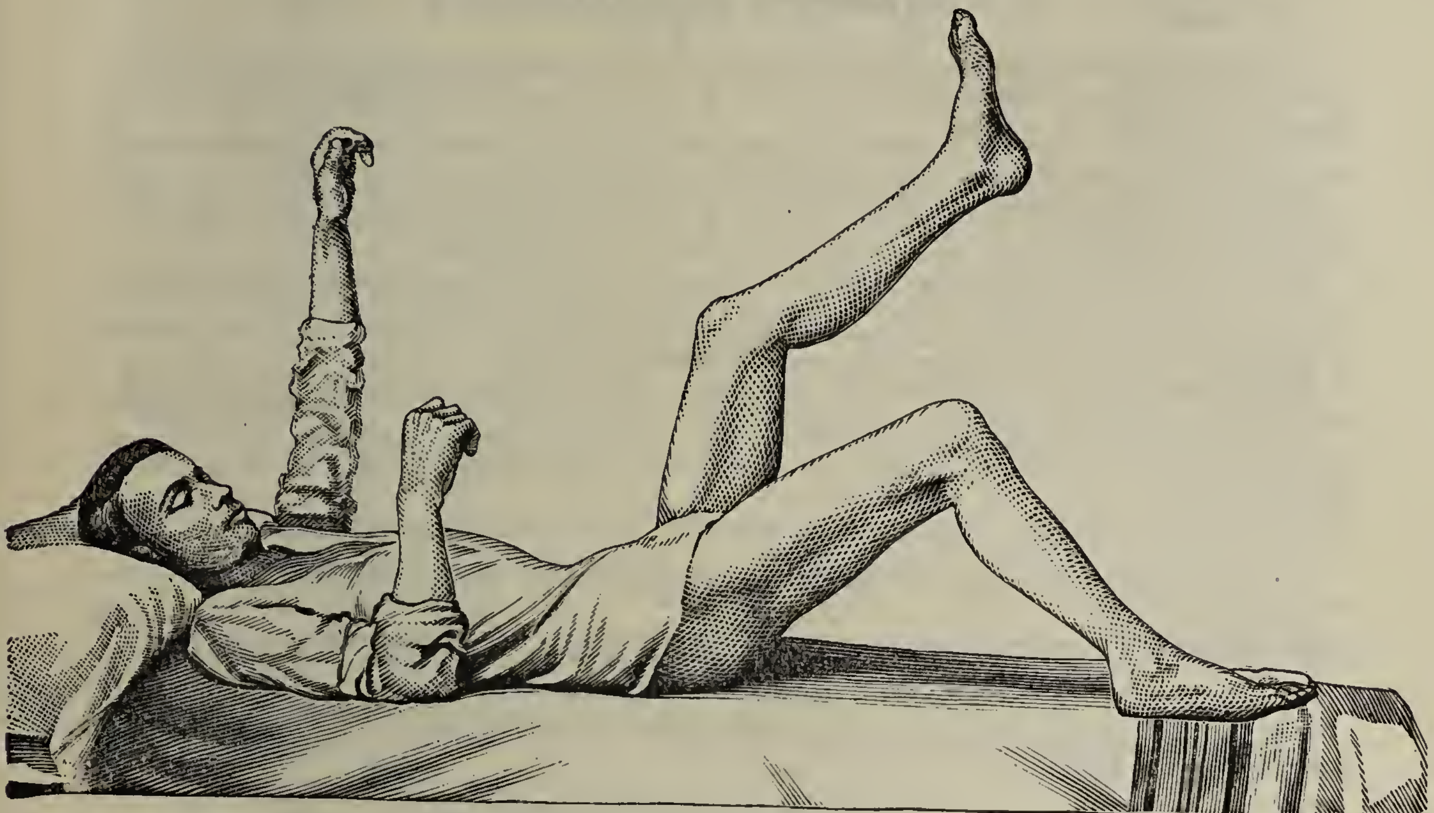

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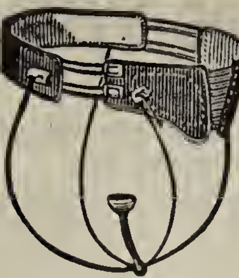

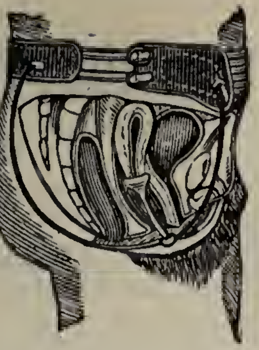

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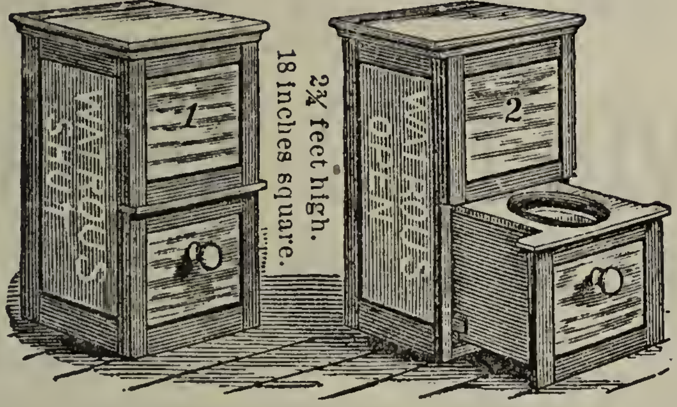
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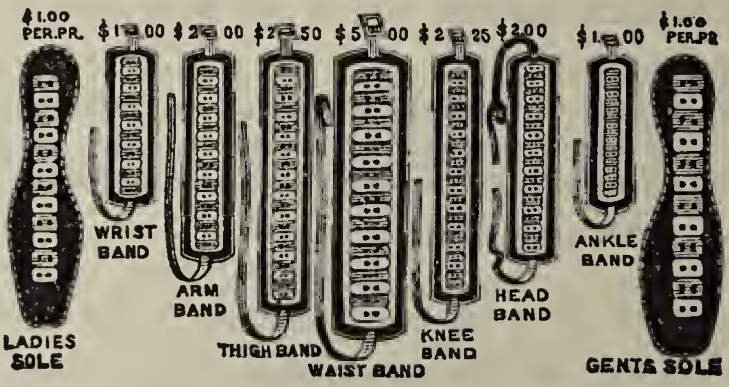

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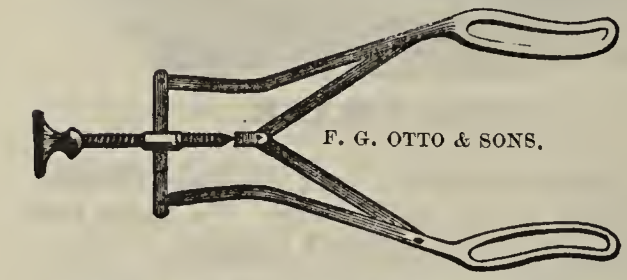
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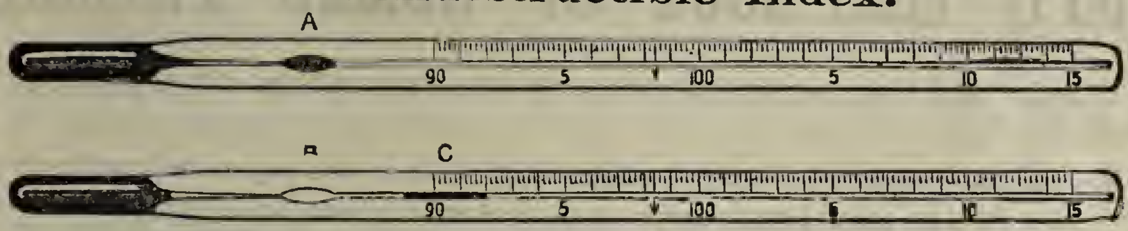

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Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures	$140 00
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